

Title: The relationship between adults' retrospective accounts of paternal parenting and psychological health: The mediating role of emotion regulation

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Abstract

The current thesis investigated the relationship between adult participants' retrospective accounts of perceived paternal rejection, psychological health and the role of emotion regulation. The study was based on the framework of Interpersonal/Parental Acceptance-Rejection Theory (Rohner, 2014) and the Process Focused Emotion Regulation Model (Gross, 1998a; 1998b). The thesis objectives were twofold; (a) to critically review, confirm and extend previous research findings suggesting that paternal parenting significantly influence offspring's psychological health and emotion regulation development (independently from mothers' parenting) and (b) to explore whether the emotion regulation strategies of suppression and reappraisal significantly mediate the relationship between perceived paternal and maternal rejection and adult-offspring's general psychological health problems.

The current research adopted a post-positivist framework and employed a cross-sectional quantitative methodology with a between subjects design that entailed hierarchical multiple regression analyses, and structural equation modelling. The analysed sample consisted of 1,117 participants ($M = 35.8$ years, range 18-76 years) of whom 902 were female (80.8%) and 215 were male (19.2%). The sample's ethnicity was: 976 'White' (87.4%) and 141 'non-White' (12.6%) and their socioeconomic status (SES) was: 204 (18.3%) lower SES; 717 (64.2%) middle SES; and 196 (17.5%) higher SES. Finally, 322 (28.8%) of participants have had previous psychotherapy experience.

Results showed that higher perceived paternal rejection significantly predicted higher levels of adult-offspring's general psychological health problems. In addition, results showed that higher perceived paternal rejection predicted participants' higher suppression and lower reappraisal use thereby confirming and extending previous studies showing the significance of fathers' influence, independently of mothers' influence from childhood/teenage years to adult years. In addition, results showed that the emotion regulation strategy of suppression significantly mediated the relationship between perceived maternal and paternal rejection and general psychological health problems. However, the emotion regulation strategy of reappraisal significantly mediated only the relationship between perceived paternal (not maternal) rejection and general psychological health problems. These findings therefore not only highlight fathers' importance in adult offspring's general psychological health problems and

emotion regulation strategies use but also suggest fathers' unique role in offspring's general psychological health problems through the use of reappraisal.

Contributions of the present study's findings on literature examining fathers' influences on children's emotional and psychological development are discussed along with limitations, future research directions and clinical implications.

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Figure 4.3. Initial SEM analysis showing paths (arrows) between the predictor variables of perceived maternal and paternal rejection, the mediator variables of reappraisal and suppression, the outcome variable of general psychological health problems and the covariate variables of age, gender SES, ethnicity and psychotherapy.

Chapter 1: Introduction

Research has shown that nearly three quarters of all psychological problems begin in childhood (DMHDRU, 1967 to date), which could have wide-ranging negative consequences on the personal, social, professional (Goodman, Joyce, & Smith, 2011), psychological and physical well-being and adjustment throughout a person's life (Felitti, Anda, Nordenberg, Williamson, Spitz, Edwards, Koss, & Marks, 1998). Research has also found that between 40% and 75% of psychological health problems involve deficits with regulating emotions (Kring & Werner, 2004; Berenbaum, Raghavan, Le, Vernon & Gomez, 2006; Kring, 2010; Jazaieri, Urry, & Gross, 2013) which in turn are strongly influenced by early parent-child relations (Gunzenhauser, Fäsche, Friedlmeier & Suchodoletz, 2014; Morris, Silk, Steinberg, Myers, & Robinson, 2007).

More specifically, researchers have found that early parent-child relations play a significant role on the offspring's psychological health and emotion regulation development (emotion regulation is understood as one's ability to shape his/her emotions, to choose when s/he has them, and how s/he expresses and experiences emotions – Gross & John, 2003). However, most parent-child research has studied the mother-child relationship (or has measured the combined effect of both parents' relationship with their children), thereby leaving father-child influences unexamined (Morris et al., 2007; Rohner & Veneziano, 2001; Veneziano, 2003; Bariola, Gullone, & Hughes, 2011; Han & Shaffer, 2014; Morelen, Shaffer, & Suveg, 2014). Thus, research has neglected the potential effects resulting exclusively from the father-child relationship on offspring's psychological adjustment and emotion regulation development (Saracho & Spodek, 2008; Ahmed, Rohner, & Carrasco, 2012; Luebbe, Bump, Fussner, & Rulon 2013).

Nevertheless, a small but significant body of research has shown that the father-child relationship has significant effects on offspring psychological health and emotion regulation development, independent of the mother-child relationship (e.g., Gomez & McLaren, 2006; Wang & Kenny, 2014; Padilla-Walker, Nielson, & Day, 2016; Gunzenhauser et al., 2014). Other studies have also found stronger associations between the father-child relationship to offspring's psychological health and emotion regulation development than that of the mothers' relationship with their children (Rohner &

Veneziano, 2001; Williams & Kelly, 2005; Tandon, Tillman, Spitznagel, & Luby, 2014; Flanders, Leo, Paquette, Pihl, & Seguin, 2009).

Nevertheless, as Lamb (2010) noted, the majority of studies showing the significance of father-child relationship on offspring emotion regulation and psychological health separately from the mother-child relationship were limited to Western countries involving a participant demographic of mainly middle-class families (Veneziano, 2000; Gunzenhauser et al., 2014; Bögels & Phares, 2008), and examining infants (Frankel, Umemura, Jacobvitz, & Hazen, 2015), children (Sanders, Zeman, & Poon 2015; Han & Shaffer, 2014; Morelen et al., 2014), adolescents (Jaffe, Gullone, & Hughes, 2010) or young adults and university students (Finley & Schwartz, 2010; Videon, 2005).

Furthermore the majority of research examining father-child relations influences on offspring's psychological health has tended to focus on broad outcomes such as personality features (Lamb, 2007; 2010; Khaleque, 2015a; 2017a) as well as utilising diverse research instruments and measurement methods that made their findings incomparable (Zaslow, Weinfield, Gallagher, Hair, Ogawa, Egeland, Tabors, & De Temple, 2006; Smith, 2011). These studies have also been criticised for having a weak theoretical foundation (Zaslow et al., 2006; Smith, 2011) thereby drawing unreliable conclusions concerning the differential effects of the father-child and mother-child relationship on offspring's psychological health (Li & Meier, 2017).

Research showing stronger effects of father-child relations than the corresponding mother-child relations on emotion regulation development has also been criticised for the lack of consensus between studies in conceptualizing emotion regulation as a construct and measuring instruments for them (Cole Martin, & Dennis, 2004; Bridges, Denham, & Ganiban, 2004; Calkins & Johnson 1998; Eisenberg, Cumberland, Spinrad, Fabes, Shepard, & Reiser, 2001a; Greenberg, Lengua, Coie, Pinderhughes, Bierman, & Dodge, 1999). These studies have also been restricted to Western, 'White' middle-class children and adolescent populations (e.g., Sanders et al., 2015; Frankel et al., 2015; Gunzenhauser et al., 2014; Enebrink, Björnsdotter, & Ghaderi, 2013).

These limitations indicate the significance of the present research to investigate influences deriving from the father-child relationship on adult-offspring psychological health and emotion regulation development, independent of the mother-child relations. The present research thereby will add to the strength of previous research showing the significance of the father-child relationship on offspring's psychological health (e.g.,

Uddin, Khaleque, Aktar, & Hossain, 2014) and emotion regulation development (e.g. Jaffe et al., 2010) and extending these effects to adulthood.

Finally, even though studies have shown the overall importance of emotion regulation on psychological health and the significance of the parent-child relationship on child's emotion regulation development, (Enebrink et al., 2013; Baker & Hoerger, 2012) research investigating emotion regulation as a potential mediator in the relation between the father-child relationship and adult-offspring psychological health has not been investigated empirically. This indicates a significant gap in the literature on this essential area which the present research also seeks to address.

By addressing previous research gaps and methodological limitations, the present research might inform Counselling Psychologists among other practitioners about the importance of the father-child relationship on offspring psychological health and emotion regulation development, thereby aiding the development of intervention programmes that could help fathers positively influence their children's emotion regulation abilities (Liew, Johnson, Smith, & Thoemmes, 2011) as well as modify existing intervention programs that aim to support adults develop awareness of their emotion regulation abilities.

To address these gaps in the literature, therefore, the present study was designed: (a) to contest the prevailing notion that mothers, more than fathers, play a greater role in offspring's psychological health (e.g., Morshed, Nore, & Naz, 2015) and emotion regulation development (e.g., Bindman, Hindman, Bowles, & Morrison, 2013) by evaluating whether early (perceived) father-child relations influence adult-offspring's current psychological health problems and emotion regulation abilities independent of mother-child relations; and (b) to evaluate emotion regulation as a potential mediator in the relationship between father-child relations and adult-offspring psychological health problems.

Thesis structure

The thesis comprises five chapters. Following the current introductory Chapter 1, Chapter 2 reviews the literature pertaining to the study of the relationship between the parent-child and psychological health and emotion regulation development.

Chapter 3 discusses methodological and epistemological approaches. More specifically, the thesis begins by presenting its epistemological position that is followed by critical

reflections on the method employed to investigate the gaps identified in the literature. Then a summary of the study's research design along with the procedure and measures employed to collect the data including ethical and confidentiality considerations is presented. An analytic plan of approach is finally presented.

Chapter 4 presents the results of the study's statistical analyses. Specifically, Chapter 4 begins with a description of participants' main characteristics (e.g., age, gender), followed by an evaluation of the main variables (i.e., perceived maternal and paternal rejection, emotion regulation and psychological health problems) that were used for the statistical analyses for normal distribution. Then, bivariate correlations (describing the direction and strength of the relationships between the main variables), followed by hierarchical multiple regressions and structural equation modelling results in regards to the study's hypotheses are presented.

Chapter 5 discusses the results along with clinical implications' as well as the study's limitations, strengths and future research directions. This chapter concludes with a summary of the research aims, methods and outcomes, followed by the research's references and appendices.

Chapter 2: Literature Review

Introduction

In this chapter, the Interpersonal/Parental Acceptance and Rejection Theory (Rohner, 1986; 2014), that is, the theory that this thesis has chosen to apply and the reason(s) for this choice, is presented. Next, the literature review examines fathers' contribution to the development of offspring's psychological health, acknowledging how fathers have been viewed within the domain of psychology over the last century and how perceptions of their importance in the field has changed is presented. This is followed by a presentation identifying how emotion regulation has been conceptualised and operationalised for research and how it influences psychological health.

The review then focuses specifically on parental influence regarding child's emotion regulation development, and the significance of both parents in this process, with particular focus on fathers. The next section focuses on the effects of emotion regulation and in particular on the effects of the emotion regulation strategies of suppression and reappraisal on psychological health difficulties. This discussion concludes with an examination of the unique paternal characteristics and how these might influence the development of their children's emotion regulation overall. The next section discusses the gaps in the literature and past/current research limitations. The chapter concludes by presenting the aims and hypotheses of the thesis, which attempt to address current research gaps and limitations.

Parental Acceptance-Rejection Theory

For most individual's lives, major satisfactions or dissatisfactions involve personal relationships with others (Duck, 1991). For children, relationships with parents (or primary caregiver/s) are likely to be the most influential (e.g., Sullivan, 1953; Coleman, 1956; Baumrind, 1971; 1991; Parker, Tupling & Brown, 1979; Bowlby, 1969/1980; Obegi & Berant, 2009). Indeed, cross-cultural research has repeatedly shown that the quality of the parent-child relationship – defined as a relationship that promotes, or does not, a sense of warmth, nurturance, caring and comforting – is a major predictor of psychological development for children and adults and can be summarized under the theoretical framework of parental acceptance-rejection (Rohner & Britner, 2002). Parental Acceptance-Rejection Theory (PARTheory) is an evidence-based theory of socialization and lifespan development that endeavours to predict and elucidate the consequences of parental acceptance and rejection universally (Rohner, 2004; Rohner,

Khaleque, & Cournoyer, 2010). This theory, developed by Rohner (1975a; 1975b; 2014), presents a solid theoretical basis for evaluating the effect of maternal and paternal parenting practices (or behaviours) on offspring's psychological health as it addresses the research limitations of parenting research as discussed above. In this theory, a significant other refers to the primary carer or parent of the child defined as an individual who a child or an adult regards as important, with whom s/he has a unique long-lasting emotional tie such as parents and intimate partners (Rohner, 1980; 2005a).

Rohner initially concentrated mostly on the influences and consequences of perceived parental practices in childhood as he was aiming to test claims that "rejected children tend to be fearful, insecure, attention-seeking, jealous, hostile and lonely" (Coleman, 1956, p. 117) universally (Hughes, Blom, Rohner, & Britner, 2005). Indeed, cross cultural studies involving more than 100 societies found that children and adults who perceived their parents or their main caregivers as rejecting were reliably associated with psychological mal/adjustment and behavioural dis/functioning (Rohner, 1975a; 1975b; 2015).

In 2014, Rohner expanded the theory beyond parents and primary caregivers to include important adult interpersonal relationships throughout the lifespan such as romantic relationships, sibling relationships, and relationships with teachers and peers. He therefore renamed this theory "Interpersonal and Parental Acceptance-Rejection Theory". Regardless of these changes, the theory continues to explain and to predict the influences of a significant other's acceptance or rejection on a person's psychological wellbeing.

This thesis will employ Rohner's (2014) Interpersonal and Parental Acceptance-Rejection Theory (IPARTheory) because one of the main aims of the present study seeks to examine how and to what extent fathers influence the psychological health of adult offspring. This question is also examined through studying the effects of perceived paternal rejection on a child's emotion regulation development. Rohner's theory is suitable because it provides a strong theoretical framework which enables the researcher to examine adults' retrospective reports of perceived paternal rejection and identify how such perceptions relate to their use of emotion regulation strategies and in turn to what extent the emotion regulation strategies influence adult offspring's current psychological health levels. In addition, Rohner's theory demonstrate how, in comparison to attachment theory for example, it has broader applications across

children's development because parental behaviours become more noticeable as children get older (Hughes et al., 2005). In the present thesis, the interpersonal acceptance-rejection theory will be referred to as IPARTheory throughout, but will examine and highlight only parental (rather than broader interpersonal) consequences of acceptance and rejection on offspring's overall psychological health.

Interpersonal/parental acceptance-rejection theory

Rohner's IPARTheory theory defines parental acceptance according to a mixture of expressions that are affectionate, loving, warm, caring, supportive and any positive behaviour and feeling that children can experience from their parents or primary caregivers (Rohner et al., 2005). By contrast, parental rejection is defined as any combination of expressions considered by the child as cold and unaffectionate, aggressive and hostile, neglecting and indifferent and undifferentiated rejection¹.

Together parental acceptance-rejection shape the warmth dimension of parenting, which is conceptualized as a continuum, on which all individuals can be positioned (Rohner, 2004; 2012).

Previous research has demonstrated that every person has developed biologically determined emotional needs for positive responses from the people most significant to him/her (Bowlby, 1988; Baumeister & Leary, 1995; Bjorklund & Pellegrini, 2002). In childhood, those needs are for parental care, comfort, supportiveness, affection or simply love (the acceptance dimension) (Khaleque, 2017a). IPARTheory suggests that when those inner biologically determined emotional needs are not adequately met, (i.e., when individuals feel or perceive² themselves to be rejected) then, irrespective of ethnicity, culture, age and gender, individuals tend to develop a particular form of psychological maladjustment that is called the acceptance-rejection syndrome (Rohner, 2004). This syndrome is characterised by a constellation of emotional, behavioural, social, and cognitive dispositions which include (a) intense levels of anxiety and insecurity (Fraley & Shaver, 2000); (b) aggressive, passive aggressive or hostile behaviours (Erkman & Rohner, 2006); (c) a dependent or defensively independent

¹ Undifferentiated rejection concerns individuals' beliefs that their main attachment figure(s) do not love or care about them even though behavioural indications exhibited by their attachment figure(s), such as being cold, aggressive or neglecting toward them, are not clear (Hughes et al., 2005; Rohner & Khaleque, 2010).

² The term 'perceived' is defined in terms of the interpretations that individuals make of main caregiver's behaviours (Rohner et al., 2005; Rohner, 2005a).

personality (Khaleque & Rohner, 2011); (d) emotional unresponsiveness (Ahmed, 2013a) and instability (Mallers, Charles, Neupert & Almeida, 2010); (e) impaired self-esteem (Buri, Murphy, Richtsmeier, & Komar, 1992); (f) impaired sense of self-adequacy (Khaleque, Rohner, & Laukkala, 2008); and (g) a negative world view (Rohner & Khaleque, 2010; 2014). These findings have been found to apply cross-culturally, as measurable and phylogenetically attained behavioural or psychological dispositions (Putnick, Bornstein, Lansford, Malone, Pastorelli, et al., 2015).

The role of parental rejection in overall psychological development

Bowlby (1977a; 1988) and Main, Kaplan, and Cassidy (1985) argued that experiences of interpersonal rejection produce mental representations (or internal working models) that influence the way a person interprets situations and the behaviour of others (Crick & Dodge, 1994). The term ‘mental representations’ is used to describe an individual’s implicit (but organised) formation of a set of expectations and beliefs about oneself, others, interpersonal relationships, the world and life in general as shaped from important past and current emotionally experiences (Hughes et al., 2005).

In addition, the influence of a person’s emotional state upon his/her mental representations serves to shape the ways in which s/he perceives, acts and reacts to new experiences involving interpersonal relationships and to affect how these experiences are stored and recalled as memories (Clausen, 1972; Baldwin, 1992; Epstein, 1994). For instance, rejected individuals might create mentally and emotionally laden images of interpersonal relationships as being wounding, unreliable and highly erratic which are passed onto new relationships, resulting in a fear of intimacy or emotional distrusting of others (Phillips, Wilmoth, Wall, Peterson, Buckley, & Phillips, 2013).

Individuals rejected as children by primary caregivers are therefore understood to become hyper-vigilant/sensitive to even the slightest signs of emotional unavailability or rejection (Ibrahim, Rohner, Smith, & Flannery, 2015). In other words, such individuals frequently assume any ambiguous interpersonal interactions as signs of others’ carelessness or insensitivity (Downey, Khouri & Feldman, 1997). Rohner (2004; 2016) theorises that perceived or real parental rejection produces negative, self-other, mental representations, which in turn create the seven dispositions mentioned above. These dispositions are likely to emerge since the perceived rejection causes extreme psychological pain, as real as physical pain as fMRI studies have shown (Squire & Stein, 2003; Eisenberger & Lieberman, 2004; Eisenberger, 2012a; 2012b; 2015).

Rohner (2016) further suggested that selective perception and attention that is based on distorted cognitive information processing or mental representations might lead rejected individuals, particularly children, to develop along psychological (Nelson & Coyne, 2009; Rohner & Buhler, 2017) and neuropsychological paths different from those of non-rejected individuals (e.g., Souza-Queiroz, Boisgontier, Etain, Poupon, Duclap, & d'Albis 2016).

For example, Ford (2005) showed that rejection negatively affects children's fundamental nervous systems and psychosocial growth. Later research has shown that the hippocampus, which is central to memory and emotion regulation, and therefore essential for healthy socioemotional adjustment, is larger in size within preschool children who have had early experiences of maternal nurturance than that of children who have not had such experiences (Luby, Barch, Belden, Gaffrey, Tillman, Babb, et al., 2012). Further research has shown that perceived parental acceptance in early years also appears to safeguard against the development of biomarkers that signify a predisposition to negative, physical health effects such as cardiovascular disease (Carroll, Gruenewald, Taylor, Janicki-Deverts, Matthews, & Seeman, 2013).

Such research evidences how the effects of perceived rejection has a quantifiable effect on an individual's physical and psychological health, which may be one reason why individuals try to avoid and/or negatively react to perceived or real rejection (MacDonald & Jensen-Campbell, 2011; Rohner, Khaleque, & Cournoyer, 2012).

Cross-Cultural evidence supporting IPARTheory

Meta-analytic work conducted by Khaleque and Rohner (2012) based on 36 studies, involving 10,943 adult and children participants (51.5% females and 48.5% males) from 18 countries (Barbados, Turkey, Czechoslovakia, Kuwait, Bangladesh, Egypt, Finland, Iran, Estonia, India, Korea, Jamaica, Mexico, Puerto Rico, Nigeria, St Kitts, Pakistan and the US) showed that perceived parental rejection-acceptance was significantly correlated with each of the seven psychological mal/adjustment dispositions as described in IPARTheory (effect sizes for children was $d = .53$; and for adults was $d = .45$).

Moreover, meta-analysis of cross-cultural research involving more than 40,000 participants, 50 countries and 100 studies has found significant associations between each of the principal expressions of interpersonal/parental acceptance-rejection (i.e., warmth/affection, indifference/neglect, hostility/aggression and undifferentiated

rejection) and overall mal/psychological adjustment as well as each of the specific seven psychological mal/adjustment dispositions (Khaleque, 2013a; 2013b; Khaleque, 2015c; Khaleque, 2017a; Ali, Khatun, Khaleque, & Rohner, 2018; Khaleque & Ali, 2017).

These meta-analytic studies provide robust support for IPARTheory's validity concerning the constructs 'acceptance' and 'rejection'. Finally, Khaleque and Rohner, (2002a) have found that parental rejection was responsible for 26 percent of children's and 21 percent of adult's psychological adjustment. This suggests that the effects of parental rejection might be less influential as individual's age. In addition, this suggests that other behavioural, genetic, neurobiological and cultural factors remain to be accounted for the 74 percent of variability of children and 79 percent of variability in psychological adjustment of adults than parental rejection (South & Jarnecke, 2015).

Limitations of IPARTheory

These studies show the utility of the IPARTheory framework in revealing the significant effects of parental acceptance-rejection on offspring's psychological and psychosocial health cross-culturally (e.g., for a review, see Khaleque, 2015a). However, methodological criticism of the theory raises the issue of data sources that include the choice of informant(s) in quantifying parental behaviour (Schwarz et al., 1985). Parental acceptance-rejection is a subjective experience so it is mainly researched by taking into account children's perception of parental accepting-rejecting behaviours (Rohner & Lansford, 2017). However, third parties or observer's reports of behaviours identifying aggression, abuse or neglect by significant others that contradict children's reports have not been taken into account in research within this area, which might render the truthfulness of the findings questionable (Khaleque & Rohner, 2002b). Research also criticises the use of narrative reports, questioning the precision of children's interpretations (Shelton, Frick, & Wootton, 1996). Therefore, some researchers prefer to employ "objective," researcher-measured observational data methods (Gardner, 2000). Self-reports are also criticised for providing weak correlations between parents and children's reports of family cohesion and conflict (Fosco, Caruthers, & Dishion, 2012). However, other studies claim advantages in employing children's accounts of parental behaviours as child development is mostly influenced by perceptions of parenting behaviours, rather than so called 'objective' narratives of events (Barry, Frick, & Grafeman, 2008).

Father-Child Relations: Research's Understudied Subject

As reviewed, research in the area of parent-child relationships focused predominantly on the maternal-child relationship (Lamb, 2010). This trend persisted up until the 1960s before which time, fathers were relatively unimportant for child-care responsibilities as opposed to women (Benson, 1968; Belsky, 1998). Children therefore spent most of the time with their mothers (Rapoport, Rapoport, Strelitz, & Kew, 1977; Nash, 1965; Cabrera, Tamis-LeMonda, Bradley, Hofferth, & Lamb, 2000) and women were seen as entirely responsible for children's development (Phares, 1996).

Paternal influences on child development were considered important only in terms of their financial and economic support of mothers, (Maccoby & Martin 1983; Biller, 1993) or role models for their children (Atkinson & Blackwelder, 1993) and therefore personal relationships between fathers and children were less common (Lamb, 1997).

Recognizing the importance of a father's love

During the 1990's, however, the influence of paternal love began to be recognised (Rohner & Veneziano, 2001; Veneziano, 2003). Women's increased employment, alongside changes in family structure and gender roles initiated changes in parenting that prompted fathers to be more active in child care (Bronstein & Cowan, 1988; Biller, 1993; Griswold, 1993; Marsiglio, Amato, Lamb, & Day, 2000). Several studies showed that fathers were not only capable and nurturing as caregivers but that they were as capable as mothers were (Bronstein & Cowan, 1988), with the father-child relational bond to be as strong as the mother-child bond (Hanson & Bozett, 1991; Fox, Kimmerly, & Schafer, 1991).

Conceptions of fatherhood have continued to change and gain greater parity with motherhood, alongside increased responsibility for the emotional care of children, attendant with offspring's increased expectations of paternal availability, both emotionally and physically. This change in expectations from offspring is likely to have considerable effects on experiences of acceptance and rejection (Rohner & Veneziano, 2001).

From the 1960's onwards therefore, researchers began to investigate the effects of paternal love/acceptance on their children's psychological development (Huttenen, 1992; Millen & Roll, 1997; Biller, 1993; Lamb, 1981). Studies investigating various facets of paternal love/acceptance (e.g., warmth) and paternal involvement have been examined in terms of accessibility (whether fathers were accessible) engagement (how

much time spent with children) and responsibility (the level of responsibility for child care and well-being). Such studies have found that high paternal involvement was significantly correlated to higher levels of cognitive and academic achievement (Radin, 1981), social competence, maturity, the ability to empathise and relate to others (Amato, 1987; Forehand & Nousiainen, 1993) to healthy psychological and personality adjustment (Reuter & Biller, 1973), less emotional distress (Easterbrooks & Goldberg, 1990), higher levels of internal locus of control (Biller, 1993) and lower psychological distress as compared to children with less involved fathers (Flouri & Buchanan, 2003).

This research initiated further interest in understanding fathers' contribution to children's development. However, as Lamb (2010) noted, these studies measured the level of paternal involvement, rather than the quality of paternal involvement, such that the impact of 'involvement' could have been positive or negative. Further research that sought to examine the effects of paternal involvement in more detail found that the quality of interaction between fathers and children had a significant influence on the child's psychological and psychosocial adjustment and development (Amato & Gilbreth, 1999; Pleck, & Masciadrelli, 2004; Sarkadi, Kristiansson, Oberklaid, & Bremberg, 2007), such as delinquency and substance abuse (Bronte-Tinkew, Moore & Carrano, 2005; Brook & Brook, 1988) and conduct problems (Paley, Conger, & Harold, 2000; Renk, Phares, & Epps, 1999). This body of research has also shown that fathers' influence was equally significant to mothers' in terms of children's well-being and life satisfaction (Young, Miller, Norton, & Hill, 1995; Rikhye, Tyrka, Kelly, Gagne, Mello, et al., 2008), happiness (Amato, 1994), emotional stability and self-esteem (Buri, 1989; Buri et al., 1992; Emmelkamp & Karsdorp, 1987; Yamasaki, 1990), and mental illness (Greenberger & Chen, 1996; Richter, Richter, & Eisemann, 1990).

More recently, several studies across a diversity of cultures, using IPARTheory found paternal rejection to be equally important to maternal rejection in regards to offspring's psychological adjustment and vulnerability to developing psychiatric disorders (Ahmed et al., 2012; Khaleque & Rohner, 2011; Akun, 2017; Carrasco, Holgado, & del Barrio, 2014; Uddin et al., 2014; Lloyd, Ward, & Blackwell-Young, 2014). A review of the relevant literature concluded that mothers and fathers appeared to exert similar influence on offspring's socioemotional and psychological health (Lamb, 2010).

Other research proposed that paternal acceptance or love in general predicted psychological health outcomes better than those of maternal love (Grand, O'Koon,

Davis, Roache, Poindexter, Armstrong et al., 2000; Tacon & Caldera, 2001) and that it has a significantly stronger association than maternal love to psychological adjustment cross-culturally (Videon, 2005; Caughy, Franzini, Windle, Dittus, Cuccaro, Elliott et al., 2012; Anno, Shibata, Ninomiya, Iwaki, Kawata, Sawamoto et al., 2015; Dwairy, 2010).

As Amato (1994, p.1039) noted ‘regardless of the quality of the mother-child relationship, the closer adult offspring were to their fathers, the happier, more satisfied, and less distressed they reported being’. Further IPARTheory guided research utilising multiple regression analyses showed that perceived paternal rejection (in terms of being emotionally cold and unaffectionate) predicted higher levels of binge eating disorder, lower life satisfaction and higher depression among 113 women (Dominy, Johnson, & Koch, 2000) as well as higher borderline personality disorder levels than those associated with perceived maternal rejection (Rohner & Brothers, 1999).

Research has also shown that paternal (not maternal) love was sometimes the single significant predictor on particular offspring outcomes such as substance abuse (Brook, Whiteman, & Gordon, 1981; Tandon et al., 2014), conduct and delinquency problems (Kroupa, 1988), personality and psychological adjustment difficulties (Matsuda & Ritblatt, 1998; Dickie, Eshleman, Merasco, Shepard, Vander, & Johnson, 1997; DuBos, Eitel, & Felner, 1994) and that father’s (not mother’s) acceptance behaviours were significantly related to adolescents’ internalising/externalising problems in southern Italy (DiMaggio & Zapulla, 2014), and in an Alabama, Texas and California low-income sample (Caughy et al., 2012).

Inconsistent findings concerning the effects of mother’s and father’s acceptance-rejection behaviours on offspring’s psychological health

Nevertheless, several studies have found that maternal (not paternal) warmth, affection, support and nurturance levels or the lack of warmth to be significantly associated with their children’s socioemotional development (e.g., Lee & Chyung, 2014; Morshed et al., 2015), self-worth among American adolescents (Laible & Carlo, 2004), adolescent’s anxiety levels (Niditch & Varela, 2012) and externalizing problems (Lowe & Dotterer, 2013). On the other hand mother’s (not father’s) rejection was found to fully predict teens’ anxious self-talk (Wei, Cummings, Villabo, & Kendall, 2014) and children’s internalising problems (Kim, Wang, Orozco-Lapray, Shen, & Murtuza, 2013).

Moreover, cross-cultural research has shown that, mother's (not father's) acceptance–rejection behaviours predicted adolescents' psychological and behavioural adjustment in Korea while father's (not mother's) acceptance–rejection predicted adolescents' psychological and behavioural adjustment in Poland (Rohner, 2014). A review of 127 published studies investigating perceived paternal and maternal acceptance and developmental outcomes as reported by children (using both IPARTheory and non-IPARTheory measures and concepts) has concluded that, regardless of gender's offspring, father's acceptance was more strongly associated with child psychopathology and problem behaviours while maternal acceptance was more strongly associated with child's socioemotional development (Li & Meier, 2017).

Other meta-analytic reviews yet concluded that paternal in comparison to maternal love or the lack of love has a stronger association in children's (Khaleque & Rohner, 2012) and adults overall psychological, behavioural and emotional health pan-culturally (Rohner & Veneziano, 2001; Rohner & Britner, 2002; Khaleque & Ali, 2017).

A potential reason for the differential findings in regards to the effects of perceived maternal and paternal acceptance-rejection behaviours on offspring psychological health development derives from research surrounding children's and young adults' perceptions of parental interpersonal power/authority, (one's capacity to casually effect others' behaviours/opinions) and prestige (the esteem, admiration, approval and/or respect that one individual holds for another individual) within the family (Rohner, 2014). For example, when children perceive mothers to have more interpersonal power and/or prestige within the family than that of fathers (Rohner & Carrasco, 2014; Sultana & Khaleque, 2016) then perceived maternal rejection seems to influence children's overall psychological health development significantly more than that of perceived paternal acceptance-rejection (Li & Meier, 2017). However, fathers' perceived acceptance-rejection (not mothers') effects on children's overall psychological health development has been found to be more impactful than that of mothers' when children perceive their fathers to have more power and authority within the family than do mothers (Radin, 1981).

Emotion Regulation

The concept of emotion regulation

It is well understood that an individual's quality of life is significantly affected by his/her internal emotional experiences (Keltner & Kring, 1998) and that the way a

person manages emotions constitutes a vital means to healthy psychosocial adjustment (Aldao, Nolen-Hoeksema, & Schweizer, 2010). Indeed, research has found that a degree of emotion management or control is necessary (Gross, 1998b) for healthy psychosocial functioning (Bridges et al., 2004). Multiple authors (Gross & Thompson, 2007; Koole, 2009; Kring & Sloan, 2010; Thompson, 1994) define emotion regulation as a multi-componential internal and external process that is responsible for the initiation, preservation, variation, intensity, evaluation and expression of emotional reactions to achieve one's goals.

Models of emotion regulation

There have been several different models of emotion regulation developed over the past two decades. Cole et al., (2004), for instance, proposed a two-factor model in which emotions are conceptually seen as different to emotion regulation as opposed to the one-factor model in which emotion regulation and emotions take place simultaneously (Campos, Frankel, & Camras, 2004). Other researchers have conceptualised and measured emotion regulation as both a trait and a state (Cole et al., 2004), as a frustration expressing process (Calkins & Johnson 1998), a self-soothing behavioural process (Garner, 1995), a coping process (Contreras, Kerns, Weimer, Gentzler, & Tomich, 2000), or have conceptualised them in terms of functionality in regards to their application of diverse behavioural and cognitive strategies (Thompson, 1994).

The Process-Focused Model of Emotion Regulation

Based on Thompson's (1994) functional standpoint of emotion regulation, Gross (1998b) suggested a Process-Focused Emotion Regulation Model. Gross's research has shown that at the start of the emotion creation process, a person appraises signs from circumstances or stimuli that provoke his/her emotion. These appraisals in turn inform the physiological and/or behavioral response, which eventually contributes to emotionally laden responses that can be both adaptive and maladaptive to the situation/stimulus (Gross, 2001). The trajectory of those initial physiological or behavioural emotion-laden responses and/or their ultimate effects, however, can be altered by emotion regulation processes that are involved throughout the emotional response. Emotion regulation processes can be categorised broadly as antecedent-focused and response-focused strategies (Sheppes, Suri & Gross, 2015; Gross, 1999; Thompson, 2011).

Antecedent-focused emotion regulation strategies modify the emotional response inclination by taking place before its full activation (i.e., prior to the complete activation of behavioural and physiological responses), thus affecting the whole emotion-production process (Gross & John, 2004). Antecedent-focused strategies, thereby, aim to modify future emotional responses (Gross, 1999). There are four antecedent-focused emotion regulation strategies: (1) situation selection such as choosing to approach or avoid places, people or situations in order to regulate emotion (Beck & Clark, 2009), (2) situation modification such as acting on the situation so its emotional effect can be modified (Foa & Kozak, 1986), (3) attentional deployment such as using different aspects of a situation to concentrate on (Sheppes & Gross 2011), and (4) cognitive reappraisal such as altering the meaning of the situation (Gross 2014a). An example of an adaptive antecedent-focused emotion regulation strategy is to view a work interview as a chance to know more about the work and not as a measure of self-worth (Gross, 2002).

On the other hand, response-focused emotion regulation strategies involve processes which minimise the emotional effects by taking place after the emotion response inclination (John & Gross, 2007; Sheppes et al., 2015). Emotion regulation thus operates retrospectively, after an emotion-provoking event. Due to this retrospective nature/characteristic of emotion regulation, response-focused strategies necessitate additional energy to change, moderate or minimise the initial response tendency (Gross, Richards, & John, 2006). Although antecedent-focus strategies are considered more adaptive than response-focus strategies, both strategies may be utilised in adaptive or maladaptive ways in attempting to manage unwanted emotions (Gross, 2002).

Research has shown that within these two theoretical groups of emotion regulation strategies, the emotion regulation strategy of cognitive reappraisal (which is antecedent-focused) and the emotion regulation strategy of expressive suppression (which is response-focused) are mostly employed by individuals (Gross, Richard, & John, 2006). These two strategies have therefore been researched most extensively.

Cognitive reappraisal strategy of emotion regulation

Within the emotion generative process, the strategy of cognitive reappraisal occurs before the emotion tendency is fully activated. Consequently, cognitive reappraisal can alter the direction of the emotional experience/expression and can decrease, reduce or neutralise its behavioural and physiological effect (Gross, 2002; Gross & Thompson,

2007). With cognitive reappraisal, individuals can either distance themselves from the emotion-eliciting situation or stimulus by assuming a detached, third-person viewpoint or they can re-interpret related aspects of the situation or stimulus (Ochsner & Gross, 2008).

Expressive suppression strategy of emotion regulation

Expressive suppression, on the other hand, takes place after the emotional state is fully experienced. Expressive suppression therefore is unable to alter the current emotional experience (Gross & Thompson, 2007; Thompson, 2011), but it works to regulate expression of the emotion by neutralising or controlling behaviour (Matsumoto, Yoo, & Nakagawa, 2008). Consequently, suppression allows the emotion to be fully experienced, and even increases physiological and/or behavioural activation due to the energy invested in the effort to control the expression of the emotion (Gross, 2001).

Research has found that the emotion regulation strategies of reappraisal and suppression have diverse affective, physiological, social and cognitive effects (e.g., Richards, Butler, & Gross, 2003; Srivastava, Tamir, McGonigal, John, & Gross 2009) despite being located in similar brain areas (Goldin, McRae, Ramel, & Gross, 2008). However, the maladaptive effects of suppression might be contextually located as both strategies have been associated with perceptions of positive and effective regulation (John & Gross 2007).

Negative effects of reappraisal and suppression

Suppression has been found to decrease the experience of positive emotions (Bush, Barr, McHugo & Lanzetta, 1989; Zuckerman, Klorman, Larrance, & Spiegel, 1981. Amstadter (2008) also showed that suppression involves intense and deliberate efforts not to accept and experience intense feelings and sensations, which in turn not only increase the experience of negative emotions but also decrease the experiences of positive emotions. As a result, suppression can lead to a sense of not being true to oneself, which in turn can lead to a negative view of the self (John & Gross, 2004).

Previous studies also found that suppressing expression of positive emotion such as pride (e.g., Stepper & Strack, 1993) or amusement (e.g., McCanne & Anderson, 1987; Strack, Martin, & Stepper, 1988) corresponds with a decreased experience of these emotions. This difference indicates that greater cognitive resources are necessitated when suppression occurs as compared to reappraisal, since it is more challenging to deal

with results of the emotion or to inhibit the initial emotional response than to reconstruct the meaning of a situation before the emotion arises (John & Gross, 2007).

Moreover, a few studies have found that habitual use of suppression was significantly associated with greater activation of the amygdala, which is commonly associated with mood and anxiety difficulties (Atmaca, 2011; Sacher, Neumann, Funfstuck, Soliman, Villringer, & Schroeter, 2012; Goldin et al., 2008) and higher blood pressure (Butler, Egloff, Wilhelm, Smith, Erickson, & Gross, 2003). In contrast, habitual usage of reappraisal was significantly related with less amygdala activation associated with lower levels of anxiety (Carlson & Mujica-Parodi, 2010; Hayes, Morey, Petty, Seth, Smoski, & McCarthy, 2010) to higher self-esteem, higher life satisfaction and lower depression (Gross & John, 2003).

These findings show that a person's use of reappraisal and suppression strategies plays an influential role in overall affective experiences (Gross & John, 2003).

Age, gender and cultural differences in the use of suppression and reappraisal

Research examining differences of age in use of suppression and reappraisal have shown that they differ throughout childhood (e.g., Eisenberg & Morris, 2002) and adulthood (e.g., John & Gross, 2007), and that there are group and individual variations (e.g., Gross & John, 2003). Despite these variations, Gross & John (2002; 2003) concluded that the older individuals become, the less they make use of suppression and the more they use reappraisal. Indeed, studies showing that older adults experience less negative emotion (e.g., Helson & Klohnen, 1998), and greater emotional control (Gross, Carstensen, Pasupathi, Tsai, Gottestam, & Hsu 1997), suggest that life experience might enable the greater use of reappraisal (considered a healthy emotion regulation strategy) and lesser use of suppression (considered a less healthy emotion regulation strategy) (Gross et al., 2004).

However, research examining differences of how gender and age interact in the use of suppression and reappraisal have produced mixed findings. Some studies show that men utilise suppression more than women (Gross & John, 2003; Spaapen, Waters, Brummer, Stopa, & Bucks, 2014); other studies have shown that utilisation of suppression increases with age but only for women (Nolen-Hoeksema & Aldao, 2011) whereas the use of reappraisal increases with age for both men and women, but has a positive effect on mood in men more than in women (Masumoto, Taishi, & Shiozaki, 2016). Other studies showed that with age women increase the use of reappraisal and decrease the use

of suppression (John & Gross, 2004), and that both sexes utilise reappraisal in equal frequency (Haga, Kraft, & Corby, 2009), yet men tend to use it automatically and with significantly less effort than women do (McRae, Ochsner, Mauss, Gabrieli, & Gross, 2008). Supporting this hypothesis by McRae et al., (2008), Domes, Schulze, Bottger, Grossmann, Hauenstein and Wirtz (2010) found that men had significantly stronger brain activity in emotion-processing areas than women had, suggesting that for men utilisation of emotion regulation strategies such as reappraisal is more effortless than it is for women. Nonetheless, others studies found no gender differences in the use of reappraisal and suppression (Gross et al., 2006).

Finally, research on the use of emotion regulation strategies of reappraisal and suppression across cultures showed mixed outcomes (Gross & John, 2003; Matsumoto, 2006; Tsai, Knutson, & Fung, 2006). Greater use of suppression and less use of reappraisal for instance were shown in Japanese samples when compared to those of Americans (Matsumoto, 2006). However, Gross and John, (2003) found that there were no ethnic differences in the use of reappraisal, but significant differences between European Americans and African, Asian and Latino Americans in the use of suppression (see Soto, Perez, Kim, Y, Lee, & Minnick, 2011). Furthermore, cultural perceptions of emotion regulation strategies differ: suppression has been regarded as less maladaptive in Asian cultures (Sai, Luo, Ward, & Sang, 2016; Hu, Zhang, Wang, Mistry, Ran, & Wang, 2014) than in Western Europe and the US, where reappraisal has been regarded as adaptive and suppression as more maladaptive (McRae, Jacobs, Ray, John, & Gross, 2012; Butler, Lee, & Gross, 2007; Abler & Kessler, 2009).

Due to the mixed findings concerning gender, culture and age influences on the use of the strategies of reappraisal and suppression, the present study will control for the effects of gender, age and culture/ethnicity when examining the influences of suppression and reappraisal on general psychological health problems.

It is important to note, however, that despite the bulk of studies showing the benefits of reappraisal on overall psychosocial functioning and psychological health as compared to suppression, there might be instances in which it is maladaptive to use reappraisal, such as changing an accurate perception of a situation rather than responding proactively to meet the challenges involved in a particular situation (Gross, 2002). Therefore, a person's ability to choose from a range of emotion-regulatory options, each of which can be adaptively used with an accurate appreciation of the associated costs and benefits

in a specific circumstance, could prove vital for individuals overall well-being (Gross, 2001).

Emotion Regulation and Psychological Health

It is well understood that the regulation of emotions consumes considerable physiological and emotional resources (Gross & John, 2003). Because of this fact, successful use of emotion regulation strategies is of vital importance to psychological and physical health and overall welfare (Werner & Gross, 2010; Kring & Sloan, 2010; Patel & Patel, 2019). Indeed, research shows between 40 and 75 percent of psychological health problems involve difficulties with emotion regulation (Berenbaum, Raghavan, Le, Vernon & Gomez, 2006; Kring & Werner, 2004; Kring, 2010; Jazaieri et al., 2013). Consequently, emotion regulation strategies of reappraisal and suppression are understood to contribute to psychological health problems when they fail to alter the emotional response in a healthy manner (e.g., to reduce negative affect when no objective threat is present) or when short-term benefits in the relief of emotion (e.g., instant anxiety reduction) are greater than long term costs (e.g., reduction in social functioning) (Werner & Gross, 2010). This can lead to diagnoses such as generalised anxiety (Mennin, Holaway, Fresco, Moore, & Heimberg, 2007), social anxiety (Goldin, Manber, Hakimi, Canli, & Gross, 2009), depression (Nolen-Hoeksema & Aldao, 2011), panic (Tull, 2006) and agoraphobia (Gross & Jazaieri, 2014), separation anxiety disorder (Turk, Heimberg, Luterek, Mennin, & Fresco, 2005) and obsessive-compulsive symptomatology (Berman, Shaw, Curley, & Wilhelm, 2018) among others (Sheppes et al., 2015).

Suppression and psychological health

Whilst suppression is assumed to reduce the experience of emotion, Amstadter, (2008) finds that suppressing in fact intensifies negative emotion in both anxious and healthy individuals (Gross & John, 2003). Individuals who use suppression habitually seem to be reluctant to experience difficult or challenging sensations, feelings and thoughts, and to avoid or control them (Hayes, 2004; Hayes & Wilson, 1994). Suppression of such affect therefore does not necessarily resolve or confront emotional challenges, but instead may sustain and further escalate negative emotional experience such as anxiety and mood difficulties (Hayes & Wilson, 1994; Kashdan, Barrios, Forsyth, & Steger, 2006). Moreover, individuals who suppress and resist feeling their primary emotional experiences (e.g., 'It's not good to feel angry towards my severely ill father.' or 'I'm not going to show I'm upset about losing my job.') might give rise to maladaptive

secondary emotional responses (e.g., guilt, fear, despair, embarrassment), which might in turn prompt the development of intensifying existing psychological health difficulties (Mennin & Farach, 2007). Indeed, research on the effects of suppression on psychological problems has indicated that individuals engaging in suppression were more likely to be obsessional, depressed (Ehring, Tuschen-Caffier, Schnulle, Fischer, & Gross, 2010), anxious (Campbell-Sills, Barlow, Brown, & Hofmann, 2006) and to be diagnosed with psychological disorders such as PTSD (Roemer, Litz, Orsillo, & Wagner, 2001), and social anxiety (Goldin et al., 2009; Werner, Goldin, Ball, Heimberg, & Gross, 2011) among others (Levitt, Brown, Orsillo, & Barlow, 2004). For example, Ehring et al., (2010) found that depression and depressive symptomatology were significantly related to repeated utilisation of suppression, leading to the preservation of negative emotions generated by negative cognitions or life events and that depression vulnerability was closely tied with suppressing both negative and positive emotions, thus suppressing emotions in situations that may not be necessary or even functional (Ehring, Fischer, Schnulle, Bosterling, & Tuschen-Caffier, 2008).

Reappraisal and psychological health

Whilst suppression has been closely tied to the development and maintenance of psychological health problems, frequent utilisation of reappraisal has been suggested to support and protect psychological health (Gross, 1998a; 2002; Garnefski, Teerds, Kraaij, Legerstee, & van den Kommer, 2004; Aldao et al., 2010). In corroboration of these findings, frequent use of reappraisal was found to be related to low negative affect and depression levels (Kashdan et al., 2006; Garnefski & Kraaij, 2006) as well as to decreased physiological arousal and negative emotions (Gross & Thompson, 2007). Moreover, frequent use of reappraisal seems to prevent, protect and relieve stress-related problems following trauma (e.g., Mayou, Ehlers, & Bryant, 2002; Ehring, Ehlers, & Glucksman, 2008) whilst deficits in the use of reappraisal were significantly associated with social anxiety (Savostyanova & Kashdan, 2012; Werner et al., 2011) and depression (Garnefski & Kraaij, 2006; Martin & Dahlen, 2005). For example, research by Werner et al., (2011) has found that people high in social anxiety report that their ability to use reappraisal is less or not effective at all. Indeed, when people high in social anxiety are instructed to practice reappraisal in order to cope with social threat, emotion regulation related brain areas show reduced activation (Goldin et al., 2009). These studies were further supported by Savostyanova and Kashdan (2012), who examined the daily diaries of 89 socially anxious adult participants concerning how

their daily emotion regulation strategies use influenced their social lives, emotions, and social events. The researchers found that socially anxious participants' reappraisal use did not help them to down-regulate their mood and to reduce distress in negatively perceived social events.

This body of research shows that the regular and rigid utilisation of suppression may create or contribute to existing psychological health difficulties when the emotion regulation strategies of reappraisal would be a more appropriate response in transforming negative emotional experience (Richards & Gross, 1999; 2000; Harris, 2001; Moore, Zoellner, & Mollenholt, 2008).

Parental Acceptance-Rejection and Emotion Regulation

The relationship between parental acceptance and rejection practices and emotion regulation has also been widely studied. Research indicates that social context significantly influences a child's use of emotion regulation development (Campos, Campos, Barrett, 1989; Thompson 1994; Cole et al., 2004). Whilst interpersonal interactions with teachers and peers, as well as wider influences of culture and the media are shown to affect children's emotion regulation abilities (Eisenberg & Morris 2002; Klimes-Dougan, Brand, Zahn-Waxler, Usher, Hastings, Kendziora et al., 2007), studies have consistently shown that emotion regulation development primarily occurs in the family context (Morris, Silk, Steinberg, Sessa, Avenevoli, & Essex, 2002; Steinberg 2001). Furthermore, research suggests that parent's emotion socialisation behaviours are a more powerful influence on offspring's emotion regulation development than that of genetic, hereditary influences (Jin, Zhang, & Han, 2017; Garner 1995; Cassano, Perry-Parrish, & Zeman, 2007).

Such socialisation behaviours include direct parent-offspring interactions (Hardy, Power & Jaedicke, 1993; Hurrell, Hudson & Schniering, 2015), parental behaviours (Cole, Dennis, Smith-Simon, & Cohen 2009), parental modelling and physical involvement (Silk, Shaw, Forbes, Lane, & Kovacs, 2006; Kopp, 1989), a family's emotional climate (Morris et al., 2007), parents use of emotion regulation strategies (Bonnie & Impett, 2016) and parents' emotion-related beliefs (Fosco & Grych, 2013; Eisenberg, Gershoff, Fabes, Shepard, Cumberland, & Losoya, 2001b; Eisenberg, Valiente, Morris, Fabes, Cumberland, & Reiser, 2003). Researchers strongly argue that parents' emotion related behaviours are the basic compounds of a person's emotion regulation development (Denham 1998; Thompson 1990; Holodyski & Friedlmeier, 2006) in particular

perceived parental emotion socialisation behaviours that are perceived by the children as accepting and rejecting (McDowell, Kim, O'Neil, & Parke, 2002; Morris et al., 2002; Valiente, Fabes, Eisenberg, & Spinrad, 2004).

Influences of accepting/rejecting parental emotion socialisation on children's emotion regulation

The influences of emotion parental socialisation behaviours on offspring's emotion regulation that is perceived as accepting (e.g., parental support, responsiveness and sympathy) have shown significant associations with children's adaptive use of emotion regulation (e.g., Fabes, Eisenberg, Karbon, Bernzweig, Speer, & Carlo, 1994; Eisenberg et al., 2003; Baker & Hoerger, 2012) and lower levels of negative emotional expression (Han & Shaffer, 2014; Morelen et al., 2014; Eisenberg, Fabes, Schaller, Carlo, & Miller, 1991). Children have been found to regulate their emotions more skilfully when their negative emotional expressions are supported and accepted by their parents (Ramsden & Hubbard, 2002; Gilliom, Shaw, Beck, Schonberg, & Lukon, 2002; Eisenberg, Fabes, & Murphy, 1996). For instance, parents' soothing/calming behaviours in response to children's displays of anger were significantly correlated to children's lower expressions of anger and fear in a variety of contexts (Denham, 1993).

On the other hand, parental rejection, hostility, psychological control and absence of sensitivity were associated with overall poor emotion regulation abilities in children (Calkins & Johnson, 1998; Repetti, Taylor, & Seeman, 2002). Indeed, parents who undermine, dismiss, minimise, censure or avoid teaching their children about emotions are thought to be responsible for the development of fewer emotion regulation strategies in their children and greater difficulty with emotional adjustment (Lunkenheimer, Shields, & Cortina, 2007; Shipman, Schneider, Fitzgerald, Sims, Swisher, & Edwards 2007; Snyder, Stoolmiller & Wilson, 2003). For instance, Lunkenheimer et al., (2007) examined the effect of negative emotion socialisation practices on eight- to 11-year-old children's emotion regulation abilities in 87 families. The researchers asked the families to discuss a positive and a difficult family emotional experience and an experience from a time when their child misbehaved. All interactions were videotaped and, after the task, parents and children were interviewed separately. Finally, parents and the children's teachers completed two questionnaires that measured children's emotion regulation abilities and behaviour problems. The teachers completed the questionnaires a month later. Results showed that children of parents who were dismissive towards their children's emotion (e.g., parent ridiculed/laughed at their children's emotional

expression) during the family interaction task had poorer emotion regulation abilities and more behavioral problems.

Finally, differences were found between parents socialisation behaviours on their sons and daughters. In particular, using a preschool sample, Chaplin Cole, and Zahn-Waxler (2005) found that fathers attended less to their sons' anxiety and sadness than to their daughters'. In addition, Cassano et al., (2007) found that mothers more than fathers felt less distressed when their sons expressed sadness and more upset when their daughters expressed sadness, a situation which affected their differential response to their daughters' and sons' emotional displays such as both parents applied a problem-focused response to their daughter's emotional displays rather than to their sons'.

Parental emotion socialisation effects and offspring's suppression and reappraisal within the Process-Focused Model of Emotion Regulation

Research has shown the effects of parental emotion socialisation behaviours on offspring's overall emotion regulation development (Snyder et al., 2003; Morris et al., 2007; Betts, Gullone, & Allen, 2009), but the effects of parental behaviours on offspring's particular emotion regulation strategies of reappraisal and suppression have been limited to childhood and early adolescent studies (e.g., Gunzenhauser et al., 2014; Jaffe et al., 2010; Bariola, Hughes, & Gullone, 2012; Enebrink et al., 2013). This research suggests that children develop the strategies of reappraisal and suppression during preschool age (John & Gross, 2004; Stansbury & Sigman, 2000; Davis, Levine, Lench, & Quas, 2010; for a review, see Stegge & Meerum-Terwogt, 2007). At this time, children go through vital prefrontal structural and physiological changes that allow them to inhibit responses, thus enabling the ability to suppress emotional expression (Centre on the Developing Child at Harvard University, 2011). At the same time, they start to realise that thoughts and emotions are interrelated and that changes in the former can cause changes in the latter and vice versa, thus enabling the ability to reappraise situations (Harris & Lipian, 1980; Morris et al., 2007; Thompson, 1991; Thompson & Meyer, 2007). At preschool age (between 2 and 5 years old) therefore, children evolve the cognitive capacity to develop the emotion regulation strategies of suppression and reappraisal, in which, as research demonstrates, parents have a key and defining role (Jaffe et al., 2010).

Indeed, Dunsmore and Halberstadt (1997) and Zeman and Garber (1996) suggested that parental reactions to children's emotional expression lead to children's formation of

scripts and experiences about possible outcomes in regards to the display of their emotions within particular contexts that accordingly impacts their emotion regulation choices. For instance, Sanders et al., (2015) find that parents who habitually behave unsupportively towards their children's emotions are creating beliefs that emotions are not welcomed and should be suppressed. Mikulincer and Shaver (2007) similarly found that children's habitual utilisation of suppression was the result of parental disapproval of negative emotion. Likewise, Berlin and Cassidy (2003) have also found that harsh and unsupportive parental reactions to offspring's emotional expressions heightens children's emotional arousal and teaches them to avoid/suppress rather than to understand and appropriately express their emotional expressions. These studies demonstrate that when children grow up in a caregiving environment that lacks nurturing and supporting behaviours, they progressively learn to suppress heightened emotional arousal. Research by Eisenberg, Cumberland, and Spinrad, (1998) has shown, however, that parents who indiscriminately support (e.g., encourage, nurture and provide positive response) their child's expression of negative emotions (e.g., anger) may also hinder the child's ability to suppress emotion.

Research conducted by Eisenberg et al., (1996) found that parents who punish and minimise their children's emotional expressions inhibit children's ability to reappraise situations. Indeed, Gottman, Katz, and Hooven (1996) found children's greater use of reappraisal was associated with parents' attention to their emotional experience and expression and to parents' explicit help of how to manage them. As Eisenberg et al. (1996), Gilliom et al., (2002), and Jaffe et al., (2010) argued, children can better reappraise and problem solve a distressing experience when parents react in an accepting and caring way to their emotional displays. These studies demonstrate how a caregiving environment that is nurturing and supporting inform children's use of reappraisal in the management of emotions.

Research investigating the differential influences of each parent on children's strategies of suppression and reappraisal as conceptualised by Gross's (1998b) Process-Focused Emotion Regulation Model showed that both maternal and paternal supportive behaviours assisted children's reappraisal, and that both unsupportive maternal and paternal behaviours prompted children's suppression thereby revealing the influences of parental behaviours on these two emotion regulation strategies (Gunzenhauser et al., 2014). These findings were confirmed by the research conducted by Jaffe et al., (2010) showing that greater levels of perceived maternal and paternal supportive behaviours

were equally associated with lower utilisation of suppression and greater utilisation of reappraisal. Other research evidence suggested, however, that offspring's use of suppression is influenced more by mothers' rather than fathers' supportive and non-supportive behaviours, while no evidence for parent-sex differences in reappraisal was shown (Bariola et al., 2012). On the other hand, Cassano et al., (2007) have found that children suppressed their emotions more in response to their fathers' parenting behaviours than those of their mothers for fear of negative reprisals (see also Zeman & Garber, 1996). A more recent study, nevertheless showed that mothers' negative emotional reactivity was significantly associated with children's lower use of reappraisal but this study examined only mothers, leaving potential fathers' effects undetected (Wald, Carthy, Shenaar-Golan, Tadmor-Zisman, & Ziskind, 2018).

The above findings seem to be inconclusive concerning the differential effects of each parent's behaviour on the emotion regulation strategies of reappraisal and suppression, which the present research will attempt to address.

Fathers' unique influence on children's emotion regulation overall development

Research to date has not found significant differences between mothers' and fathers' influence on children's emotion regulation development (Morris et al., 2007).

However, there is a stark paucity of studies that attempt to identify differences between parents. Studies that examine the differences between mothers' and fathers' influence on children's emotion regulation development apply a range of emotion regulation models, and do not examine the specific strategies of suppression and reappraisal (for a review, see Bariola et al., 2011). However, these studies often find that fathers' characteristics have a unique effect on children's overall emotion regulation development that differ from mothers' effect (e.g., Chang, Halpern & Kaufman, 2007; Cabrera, Shannon & Tamis-LeMonda, 2007; Sarkadi et al., 2007).

Yogman (1982), for instance, found that father-infant interactions were characterised as more physically challenging and arousing (e.g., touching infant's body parts, raising infant's overall arousal levels) than mother-infant interactions, and that play episodes ensued significantly more with fathers than with mothers. Yogman (1982) concluded that fathers' playful interactions strengthen infants' emotion regulation skills by developing internal control and the ability to sustain homeostasis in stressful-eliciting situations. Herzog (1985) similarly found that fathers increase their children's emotional stimulation such as excitement or fear (as opposed to mothers who mostly put emphasis

on comforting their children at stressful times) that helps them in turn to learn ways to organise, control, adjust and regulate their intense emotions. For instance, research that investigated father-children play in the form of rough-and-tumble play characterised by playful yet aggressive behaviours such as jumping, wrestling and tumbling (especially for boys) has found that fathers' play behaviours prompted children's emotion regulation as it excited their impulses and pushed their emotional boundaries which fathers in turn helped them to regulate thereby expanding existing emotional and behavioural boundaries as well (Fletcher, St George & Freeman, 2013; Flanders, et al., 2009; Paquette, 2004).

Similarly, researchers have argued that stimulating and challenging paternal behaviours boost children's emotion regulation development thereby helping them to develop resources to deal with novel situations and to socially interact with the world (Hazen et al., 2010; Paquette, 2004; Bögels, & Phares, 2008; Bögels & Perotti, 2011). Likewise, research involving an ethnic-minority sample has shown that stimulating fathering exclusively contributed to children's emotion regulation strategies in the form of response-inhibition (Owen, Caughy, Hurst, Amos, Dyer et al., 2013) and that children's emotion regulation strategies received higher ratings when their fathers were more dominant during rough-and-tumble play than fathers who were low dominant during play (Flanders, Simard, Paquette, Parent, Vitaro, et al., 2010).

Moreover, fathers' unique communication behaviours were also found to influence emotion regulation development (Mallers et al., 2010). For instance, when fathers talk to their children, they are more likely to speak in ways that challenge children's linguistic and pragmatic abilities than mothers do, since they use more directives, such as why/what questions, imperatives, clarification questions, and references to past events (e.g., Leaper, Anderson, & Sanders, 1998). As these forms of speech are more composite, they place more linguistic strains on children, and, thus, the researchers suggest that fathers' distinctive communication styles directly coach children about linguistic and communicative demands of social exchanges and at the same time teach them to manage stressful emotions derived from social demands (Leaper et al., 1998).

Research evidence concerning fathers' contribution to child's emotion regulation development

Several studies investigating the influences of both parents on children's emotion regulation development have found that fathers (not mothers) have unique effects on

offspring's emotion regulation development (Cabrera et al., 2007; Malin, Cabrera, Karberg, Aldoney & Rowe, 2014) that fathers' (more than mothers') unsupportive behaviour predicted children's higher rates of negative affective displays and emotion regulation levels (Shewark & Blandon, 2015); that paternal (more than maternal) negative psychological controlling behaviours were significantly associated with adolescents' difficulties in emotion regulation and depressive vulnerability (McEwen & Flouri, 2009); and that fathers' (more than mothers') intrusiveness had a significantly negative effect on four-year-old children's social skills and emotion dysregulation (Stevenson & Crnic, 2013).

However, these studies that found fathers' unique contributions to children's emotion regulation development have not examined the strategies of suppression and reappraisal as outlined in Gross's (1998b) Process-Focused Emotion Regulation Model. The present thesis will seek to address this gap in the literature.

Research evidence concerning mothers' contribution to child's emotion regulation development

Other studies contest the research that claims fathers' role is more significant in offspring's emotion regulation development (Fivush, Brotman, Buckner, & Goodman, 2000). Studies have also found evidence to suggest that the mothers' influence on children's development of emotion regulation is greater than fathers' (Denham & Grout, 1992; Hardy et al., 1993; Calkins & Johnson, 1998; Han & Shaffer, 2014; Bindman et al., 2013; Wald et al., 2018; Morelen et al., 2014). However, most of these studies investigated only maternal effects and examined mostly coping behaviours, thereby neglecting potential paternal effects (i.e., Hardy et al., 1993; Calkins & Johnson, 1998) and have not examined the emotion regulation strategies of suppression and reappraisal as outlined in Gross' (1998b) Process-Focused Emotion Regulation Model, which the present study will seek to address.

Gaps and Research Limitations Identified in the Literature Review

Mixed findings in regards to fathers' and mothers' differential effects on children's psychological health

The majority of research evaluating parents' influences on offspring's psychological health has not often examined fathers' contribution separately from mothers' (Saracho & Spodek, 2008). When both mother's and father's influences on offspring's psychological health were examined, results often showed that mother's (not father's)

parenting behaviours significantly predict offspring's psychological health (Lee & Chyung, 2014; Morshed et al., 2015). A small but important body of research, however, found both maternal and paternal parenting affected offspring's psychological health with equal significance (e.g., Gomez & McLaren, 2006; Wang & Kenny, 2014; Padilla-Walker et al., 2016) with a few studies that found paternal influences on offspring's psychological health to be greater than that of the corresponding maternal influences (Williams & Kelly, 2005; Rohner & Veneziano, 2001; Tandon et al., 2014).

Accounting for these mixed and even contradictory findings, some criticise this body of research for its methodological limitations. Some of the studies, for instance, producing results that highlighted father's importance did not control or examine the effects of maternal parenting behaviours (e.g., Moretti, Bartolo, Craig, Slaney, & Odgers, 2014; Kim et al., 2013; Ahlberg & Sandnabba, 1998), therefore, maternal contributions might have gone undetected. The majority of paternal love research has also generated its data from parent's or children's reports, rather than adult's retrospective accounts (Lamb, 2007).

In addition, some authors have noted that paternal research has studied only 'White' participants derived from Western cultures (e.g., Veneziano, 2000; Lamb, 2010). The few studies that did evaluate similarities and differences among cultures in regards to the effects of paternal warmth on offspring's overall psychological health were inconclusive (Lamb, 2010). Most research studies have also not included SES information in analyses (e.g., Williams & Finley, 1997; Harris, Furstenberg, & Marmer, 1998; Tacon & Caldera, 2001; Renk et al., 1999; Millen & Roll, 1997; Kroupa, 1988). When SES was included, it mostly involved middle-class status (e.g., Yamasaki, 1990; Russel & Russel, 1996; Carrasco et al., 2014), was limited to American samples and produced mixed results (Lamb, 2010). It remains in dispute whether parent's SES has an effect on offspring's psychological health (Pleck, 1997; Veneziano & Rohner, 1998). This research shall therefore generate data on the SES of participants' parents.

Furthermore, paternal research has mostly used children (e.g., Radin, Williams, & Coggins, 1993; Siantz & Smith, 1994; Russel & Russel, 1996; Frankel et al., 2015) or children and adolescent samples (e.g., Lefkowitz & Tesiny, 1984; Amato & Gilbreth, 1999; Paley et al., 2000). When adult offspring were present in some of the studies, then their average age range was 19 years old (e.g., Buri, 1989; Videon, 2005) and mostly college students (e.g., Barber & Thomas, 1986; Millen & Roll, 1997), thus limiting the

generalisability of results to the early years of adulthood, leaving the effect of negative parenting on the adult population under-examined (Lamb, 2010).

Inconsistent outcomes of this body of research about fathers (not mothers) having a significant effect on their children's overall psychological health might be partly due to the employment of diverse methodologies (Quach, Epstein, Riley, Falconier, & Fang 2015). For example, although overall paternal and maternal research measures tapped into similar concepts, such as 'warmth' or 'rejection' (Barber, Stolz, Olsen, Collins, & Burchinal, 2005), their findings are not comparable (Smith, 2011; Zaslow et al., 2006), as each form of assessment instrument measuring these concepts was articulated differently using different/unique sets of questions. These differences make it difficult to draw conclusions concerning the research that examines the differential effects of paternal vs maternal rejection on offspring's psychological health (Li & Meier, 2017). Consequently, these findings make their suitability for social or clinical decision-making difficult (Sarkadi et al., 2007).

An initial aim of this thesis is therefore to confirm and consolidate previous findings, showing that the effects of paternal parenting during childhood are significant (independently to the effects of maternal parenting) on adult's offspring psychological health by adopting the established theoretical model and measurements instruments of IPARTheory, thereby addressing the above mentioned methodological limitations at the same time.

Research limitations concerning the unique paternal effect on child's emotion regulation development

An additional area that remains unclear is the relative effects of paternal parenting behaviours on offspring's emotion regulation development (Morris et al., 2007). A few studies imply that fathers have a greater influence on children's emotion regulation development than mothers have since fathers interact (Fletcher et al., 2013) and communicate with their children differently than mothers do (Leaper et al., 1998; Mallers et al., 2010), whilst others argue that mothers are more important in the development of emotion regulation than fathers (Fivush et al., 2000).

This research, however, suffers from limitations, including the narrow demographic of participant samples (Morris et al., 2007; Cabrera et al., 2007) derived from Western, American and European American, middle-class populations, thereby limiting the generalisability of the outcomes to the US population, and incomparable findings due to

the difference between conceptualisation and measurement (Gottman et al., 1997; Shewark & Blandon, 2015; McEwen & Flouri, 2009; Stevenson & Crnic, 2013). Another criticism of the research that investigated associations between paternal socialisation practices on offspring emotion regulation development also tend to focus on infancy and early childhood (e.g., Herzog, 1985; Owen et al., 2013; Kochanska, Aksan, Prisco, & Adams, 2008).

Limited and mixed research findings concerning the influences of paternal rejection during childhood on adult-offspring reappraisal and suppression strategies

Similarly, the influence of paternal parenting on offspring's reappraisal and suppression utilisation remains relatively unclear. For example, most current research has found no differences between the effects of mothers' and fathers' parenting behaviours on offspring's strategies of reappraisal and suppression (Jaffe et al., 2010; Gunzenhauser et al., 2014). Cassano et al., (2007) yet Zeman and Garber (1996) claim that children suppressed their emotions more in response to their fathers' parenting behaviours than in response to their mothers'. On the other hand, Bariola et al., (2012), found that offspring's use of suppression was influenced more by mothers' rather than fathers' supportive and non-supportive behaviours, whilst there was no evidence for parent-sex differences in reappraisal. A more recent study, showed that mothers' negative emotional reactivity was significantly associated with children's lower use of reappraisal but this study has only researched mothers therefore, leaving potential fathers' effects undetected (Wald et al., 2018).

These mixed findings do not show with certainty whether fathers influence their offspring's strategies of reappraisal and suppression independently of mothers. Moreover, the research examining the use of suppression and reappraisal again has focused mostly on early childhood (e.g., Sanders et al., 2015; Frankel et al., 2015), occasionally on early or middle childhood (Bariola et al., 2012; Enebrink et al., 2013; Gunzenhauser et al., 2014) or adolescent years (Jaffe et al., 2010), but not on adults (for a review, see Bariola et al., 2011). Given that emotion regulation abilities carry on developing throughout middle childhood and adolescent in accordance with psychosocial and cognitive changes (Eisenberg & Morris 2002) reflected on the neurological maturation that takes place in the limbic and prefrontal cortex (Spear 2000) which are implicated in emotion regulation processes (Steinberg 2005; Lamm & Lewis, 2010; Yap, Allen, & Sheeber, 2007), research limited to childhood years might miss

probable changes on emotion regulation strategies that occur throughout adolescence to adulthood (Bariola, et al., 2011).

Finally, the majority of studies evaluating parental influences on the strategies of suppression and reappraisal also suffer from un-generalisability, again based on participant samples from middle-class American and European American populations (for a review, see Bariola et al., 2011).

A further aim, of the current thesis therefore will be to address this relative absence of research on the differential effects of maternal and paternal parenting on adult-offspring emotion regulation strategies of suppression and reappraisal as outlined by Gross's (1998b) Process-Focused Model of Emotion Regulation by exclusively examining adult's perceptions of rejecting maternal and paternal behaviours during their childhood from diverse ethnic and socioeconomic backgrounds.

Limited research concerning potential mediators of the relations between parental rejection effects and adult-offspring psychological health difficulties

Research has shown that psychological health difficulties are closely related with deficits in the use of the emotion regulation strategies of reappraisal and suppression (Werner & Gross, 2010). The development of these strategies in turn has been shown to be influenced by early parenting behaviours (Gunzenhauser et al., 2014). However, the indirect or mediating effects of reappraisal and suppression on the relationship between the influences of perceived early maternal and paternal parenting behaviours and adult-offspring's psychological health has not been investigated empirically, indicating a significant gap in the literature on this essential area.

Indeed, although previous research found that negative parenting behaviours may indirectly lead to emotional or cognitive changes in youth (such as emotion regulation deficits – Morris et al., 2002), which in turn may create or maintain psychological health difficulties such as anxiety (Nanda, Kotchick, & Grover, 2012; Affrunti & Ginsburg, 2012; Niditch & Varela, 2012), the specific emotion regulation strategies of reappraisal and suppression as mediators have not been investigated.

Another aim of the current study therefore will be to evaluate whether the specific strategies of suppression and reappraisal as distinct facets of emotion regulation mediate the relationship between adult-offspring's general psychological health problems and their perceptions of childhood experiences/perceptions of parental rejection focusing in

particular on paternal rejection. Therefore, the present study adds to the existing literature on the processes that might mediate the relationship between mothers' and fathers' parenting behaviours and offspring psychological health, by adding the emotion regulation strategies of suppression and reappraisal.

Application of the Current Study to Counselling Psychology

Psychological health difficulties are highly correlated with early adverse experiences (Bowlby, 1980). Parenting is understood to have a significant effect on the psychological development of children (Lamb, 2010). Research has shown that the way a person regulates his/her emotion through strategies of suppression and reappraisal significantly affects their psychological wellbeing (Aldao & Nolen-Hoeksema, 2011; Tull, 2006; Gross & Jazaieri, 2014)

The current research therefore helps to inform practitioners about the effects of parenting in regard to the use of suppression and reappraisal by adults who seek to provide support to individuals who have been negatively affected by their paternal relationship. For instance, child and family counsellors could develop intervention programmes that could educate fathers regarding the effects of positive parenting behaviours and how to aid their children in coaching the development of emotion regulation strategies (Liew et al., 2011). Therefore, the present research findings may assist in the design of novel programmes or modifying existing intervention programmes that aim to support adults develop awareness of their use of suppression and reappraisal strategies.

Recognising the importance of the father in offspring development will help to reduce the common incidence of 'mother blaming' for children's maladjustment and psychological health difficulties. This approach could result in greater inclusion of fathers in clinical research. In addition, the present study might enhance counselling psychology training programmes by educating trainees about unique paternal influence on children's development and psychological wellbeing in later life. This thesis might therefore help to challenge the prevailing academic paradigm in the social sciences that is dominated by the concept of the dyadic – mother-child – model by presenting an alternative triadic – father-mother-child – model (Lamb, 2010). Furthermore, this research highlights the need to explore social policy implications of the effects of fathers' accepting-rejecting behaviour towards their children in custodial decision making.

Aims of the Present Research

The present study had two broad aims. The first aim was to confirm previous evidence that perceived early paternal rejecting parenting significantly influences offspring's psychological health and emotion regulation development, independent of perceived early maternal rejecting parenting. The second aim was to investigate whether the emotion regulation strategies of suppression and reappraisal significantly mediate the relationship between early perceived paternal and maternal rejecting parenting and adult offspring's psychological health problems.

Parents' influence on offspring's psychological health problems

The majority of previous studies argued that mothers' parenting influences are mainly responsible for offspring's psychological health development but several of these studies have merely examined mothers' influences, thereby leaving potential fathers' influences undetected (for a review, see Lamb, 2010). A small body of research, however, found fathers' negative parenting practices to predict offspring's psychological difficulties independent of maternal negative parenting practices and sometimes to be a significantly stronger predictor of offspring's psychological difficulties than the corresponding maternal negative parenting practices (for a review, see Rohner & Britner, 2002). This body of research nevertheless has been criticised for methodological limitations (e.g., Videon, 2005; Veneziano, 2000; Rohner & Veneziano, 2001; Smith, 2011; Zaslow et al., 2006).

The present study was designed to replicate previous findings that show that fathers who were perceived by their children as rejecting during their childhood had a negative effect on their offspring's psychological health in adulthood, independent of the corresponding maternal effect. The present study, therefore, first examined mothers' and fathers' effect on adult-offspring's general psychological health problems independent of each other. This objective was achieved by controlling for each other's effects through the use of linear regression analyses and structural equation modelling.

Accordingly study hypotheses were as follows:

- Higher maternal rejection scores will be significantly predictive of adult-offspring's higher general psychological health problems scores.
- Higher paternal rejection scores will be significantly predictive of adult-offspring's higher general psychological health problems scores.

Suppression, reappraisal and psychological health problems

The present research was also designed to replicate previous findings showing the effects of the emotion regulation strategies of suppression and reappraisal on psychological health problems (Aldao et al., 2010; Werner & Gross, 2010), thereby adding to the strength of findings in this area and on the validity and reliability of Gross's (1998b) Process-Focused Model of Emotion Regulation. Thus, the present study expects that participants who score low on the emotion regulation measure of reappraisal and high on the emotion regulation measure of suppression will also score high on the psychological health problems measure.

Accordingly study hypotheses were as follows:

- Lower reappraisal scores will be significantly predictive of adult-offspring's higher general psychological health problems scores.
- Higher suppression scores will be significantly predictive of adult-offspring's higher general psychological health problems scores.

Influences of parental behaviours on offspring's emotion regulation strategies

Furthermore, based on current studies that show the importance of fathers' influence on the use of reappraisal and suppression (e.g., Gunzenhauser et al., 2014) on children and teenage samples (for a review, see Bariola et al., 2011), the present study was designed to explore whether paternal parenting will influence adult-offspring's use of suppression and reappraisal independent of maternal parenting by examining the influences of both parents at the same time.

Accordingly study hypotheses were as follows:

- Higher maternal rejection scores will be significantly predictive of adult-offspring's lower reappraisal scores.
- Higher maternal rejection scores will be significantly predictive of adult-offspring's higher suppression scores.
- Higher paternal rejection scores will be significantly predictive of adult-offspring's lower reappraisal scores.
- Higher paternal rejection scores will be significantly predictive of adult-offspring's higher suppression scores.

Mediating (indirect) effects of emotion regulation strategies

Furthermore, the present study was designed to address the absence of research into the emotion regulation strategies of reappraisal and suppression as potential mediators of the relationship between the effects of perceived early maternal and paternal parenting behaviours and adult-offspring's psychological health problems. Previous findings showing adults' psychological health problems are closely related to the use of reappraisal and suppression (Werner & Gross 2010), which in turn are influenced by early parenting behaviours (Jaffe et al., 2010; Gottman et al., 1996). In addition, research findings also showed that overall emotion regulation development is affected by the unique characteristics of fathers (Flanders et al., 2009; Paquette, 2004). Based on the above findings, the present study therefore aimed to explore the mediating effects of reappraisal and suppression on the relationship between mothers' and fathers' rejecting parenting behaviours and adult-offspring's general psychological health problems separately, from each other's effects. Thus, the present study hypothesised that the relationship between perceived maternal and paternal rejection and psychological health will be mediated significantly by the ER strategies of reappraisal and suppression.

Accordingly study hypotheses were as follows:

- Reappraisal will significantly mediate the relationship between maternal and paternal rejection and general psychological health problems.
- Suppression will significantly mediate the relationship between maternal and paternal rejection and general psychological health problems.

Summary of aims and hypotheses of the present research

H1: Higher maternal rejection scores will be significantly predictive of adult-offspring's higher general psychological health problems scores.

H2: Higher paternal rejection scores will be significantly predictive of adult-offspring's higher general psychological health problems scores.

H3: Lower reappraisal scores will be significantly predictive of adult-offspring's higher general psychological health problems scores.

H4: Higher suppression scores would be significantly predictive of adult-offspring's higher general psychological health problems scores.

H5: Higher maternal rejection scores will be significantly predictive of adult-offspring's lower reappraisal scores.

H6: Higher maternal rejection scores will be significantly predictive of adult-offspring's higher suppression scores.

H7: Higher paternal rejection scores will be significantly predictive of adult-offspring's lower reappraisal scores.

H8: Higher paternal rejection scores will be significantly predictive of adult-offspring's higher suppression scores.

H9: Reappraisal will significantly mediate the relationship between maternal and paternal rejection and general psychological health problems.

H10: Suppression will significantly mediate the relationship between maternal and paternal rejection and general psychological health problems.

Chapter 3: Methodology

Epistemological and Methodological Choices

The following section is an analysis of epistemological and methodological choices underpinning the present research. This section begins by presenting a review of the four main paradigms among numerous others (Morrow, 2007) that inform Counselling Psychology research, followed by a discussion of the paradigms presented and how these inform the present research's epistemological and methodological framework. Then, a critical reflection on specific methodological problems identified in the literature review and how these guide the present study's methodological choices is presented.

Critical review of the key paradigms that inform counselling psychology research and practice

Filstead (1979) describes a paradigm as a set of beliefs and assumptions that are utilised for the organised study of the social world, embedded in a specific philosophical and theoretical framework. The advocate of a particular paradigm holds a specific view regarding the form and nature of reality (ontology), the sources of knowledge, reality and the relationship between them (epistemology), the research values (axiology), and how reality could be studied and discovered (methodology) (Guba & Lincoln, 1994). Consequently, a researcher's selection of participants, methods, tools and/or instruments used in the study of the social world is guided by the philosophical assumptions derived by his/her paradigm (Denzin & Lincoln, 2000b). Guba and Lincoln (1994) and Ponterotto (2005), acknowledge the four main paradigms of positivism, post-positivism, critical-ideological and constructivism.

Positivism

Gergen, (2001a; 2001b), Keeley, Shemberg, and Zaynor (1988) and Guba and Lincoln (1994) refer to positivism as the established view that has been the prevailing force in psychology for the past 300 years, since the Enlightenment period. Ponterotto (2005) notes that positivist psychology research attempts to explain the expression of phenomena with the aim of eventually being able to predict and control them. Lincoln & Guba (1985) summarise the six key ideas of positivism: (1) the discovery of laws that result in the explanation, description and prediction of phenomena should be the chief aim of the natural and social sciences, (2) natural and social sciences should apply the hypothetic-deductive method, (3) categories must be only defined by empirical

categories, (4) a true, absolute and observable reality exists, (5) the laws of nature are uncovered by data, and (6) absolute laws of nature can be revealed by large samples as they repress data's peculiarities or idiosyncrasies.

In other words, positivism embraces realism as its ontological position, suggesting that reality is determined by mechanisms and laws that are universal and can be studied objectively by utilising the hypothetico-deductive method (Lincoln & Guba, 1985). Positivism's epistemology holds a dualist and objective value-free or value-neutral axiological position and its methodology is experimental. This means that hypotheses are subjected to empirical procedures that are controlled to prevent outcomes from improper influence to verify them (Guba & Lincoln, 1994).

Magee (1985) argued, however, that the induction method of positivism defined as the construction of single generalisable arguments by the accumulation of observational phenomena is flawed. Magee noted that singular observational statements have no rational grounds to be generalised, since observations that have led to scientific theories in the past cannot predict that they will be also observed in the future since observing future events is not possible. Thus, the hypothetico-deductive methodology that underpins generalisable statements based on large accumulative data of observable phenomena is essentially unreliable. This means that the foundation on which positivist science is established cannot be validated (Ponterotto, 2005). In addition, positivists have been criticised for their claim that research can be value-free and absolutely objective – a belief that is strongly opposed by other paradigms such as post-positivism (Popper, 2002a).

Post-positivism

Post-positivists, unlike positivists who highlight that independence is possible between the researcher and the researched (object or individual), accept that the values, background, previous knowledge and theory of the researcher can significantly influence what is researched and observed (Zammito, 2004). Thus, objectivity is pursued by recognising the potential influences of biases (Phillips & Burbules, 2000). Knowledge is therefore based upon human assumptions and speculations rather than on priori calculations from objective individuals and, as such, the statements of these speculations are justified by a set of warrants which can be either withdrawn or revised through further research findings (Popper, 1963).

Therefore, Popper (2002b) argued that although it may be not possible to validate scientific theories, it is possible to falsify them by making their scientific statements as explicit as possible in order to expose them to refutation and criticism. This exposure is important as it is through this continuous challenge to disprove scientific statements that new knowledge is acquired, which in turn can replace old statements with ones that have greater explanatory power (Popper, 2002a). Thus, a theory must be testable and open to falsification in order to be scientific (Magee, 1985). Through this continuous process of falsification, post-positivist research aims to increasingly approach the truth of phenomena (as reality is assumed to exist), yet it acknowledges that discerning when absolute reality has been achieved is not only impossible to know, but also impossible to be perfectly understood because human intellectual mechanisms are inherently imperfect (Popper, 2002b).

Although post-positivists, like positivists, employ an experimental methodology, holding to a neutral and value-free axiology, thus, an objectivist epistemology, they are also aware that their values and theories influence their observations, and that measurements entail types of error so that it is impossible to be utterly objective. This is one of the main differences between post-positivists and positivists, who believe that research can be value-neutral or value-free (Robson, 2002). Post-positivists thus hold an ontological stance of critical realism in which reality can be ‘recognised’ probabilistically and therefore they must try to understand how their axiology impacts on their investigations through their selection of the research questions, measurement procedures, population studied, as well as by the selection of the processes that are used to analyse and interpret their findings (Guba & Lincoln, 1994).

Critical-ideological

Critical-ideologists’ epistemology is subjectivist and transactional with a value-laden axiology since the researcher’s values are interactively linked and therefore influence the participant (Morrow, 2007). Although critical-ideologists agree that many realities exist, they also note that a ‘real’ reality exists that is shaped by a disorderly collection of ethnic, cultural, gender, socio-political factors related to social domination. Consequently, several critical-ideological theorists hold a critical-realist ontology (Kincheloe & McLaren, 2000). Critical-ideologists’ goal is to challenge the status quo of the existing reality, to end current social domination thus allowing social justice to take place. The interaction between the researcher and the participant that critical-ideological research employs is a dialectic which aims to inform participant’s

consciousness toward democratic change and transformation (Guba & Lincoln, 1994; Ponterotto, 2005). Research areas of the critical-ideological paradigm often involve feminist, social justice and multicultural issues (Morrow & Smith, 1995).

Constructionism-interpretivism

Constructivists assume that reality is constructed in the mind of the individual rather than being an external reality and that the human intellect creates many apprehendable and sometimes conflicting social realities that might change as their constructs are further informed (Hansen, 2004). Constructionists thereby adopt a relativist ontology involving equally valid realities that are co-constructed by participants and researchers, revealing a subjective and transactional epistemology and a value-laden axiology (Ponterotto, 2005).

Constructivist methodology suggests that, in order to understand and reveal the meaning of phenomena, an interactive researcher-participant dialogue must take place (Sciarra, 1999). The reflective dialogue is an essential and distinguishing characteristic of constructivism as meaning is created and at the same time co-constructed by both parties (Ponterotto, 2005).

One criticism of constructivism is that it ignores biological influences on behaviour or culture and claims that these influences are insignificant in achieving an understanding of human behaviour (Sokal & Bricmont, 1999).

The Research's Underpinning Paradigm and Epistemological Stance

My research holds a post-positivist position since I consider that a 'true' reality of social occurrences exists, which I propose can be probabilistically 'known' to an extent (Popper, 2002a). Nevertheless, I also acknowledge that constructivists' notions are valid to the degree that similar social occurrences might be embraced and perceived in a unique and subjective manner by each individual, suggesting the existence of multiple, equally-important realities (Ponterotto, 2005).

However, even though I acknowledge an individual's formation of social phenomena to be unique, I maintain the notion that common patterns of human cognitions, emotions, behaviours and physiological responses also exist when individuals are exposed to similar phenomena. I therefore disagree with the constructivist notion that reality is only constructed in the mind of the individual, which ignores common biological influences on behaviour or culture (Sokal & Bricmont, 1999).

In regards to this study, I believe that whilst each participant's experience of paternal rejection will never be similar to another participant's experience, it might underpin common patterns of cognitive, emotive, physiological and behavioural grounds of experience. These common patterns between experiences of paternal rejection might negatively influence participant's psychological health (indirectly) by hindering the development of a person's emotion regulation strategies of suppression and reappraisal.

For this reason, even though I recognise the value of the search for a deeper meaning and understanding of the unique experience of the individual as 'it is lived and constituted in awareness' (Polkinghorne, 2005, pp 138), which qualitative research could offer, I do not consider a qualitative research approach to be suitable for this study. Qualitative findings do not offer a truth that can be tested and confirmed, but one possible understanding or hypothesis of the problem as it emerges by the interaction between the participant and the researcher (Popper, 2002a). On the other hand, quantitative research systematically studies observable phenomena via statistical and mathematical techniques and thus measures data to formulate findings and to reveal patterns which can be generalisable (Goertzen, 2017).

Whilst a qualitative design in this study might have revealed important insights into an individual's subjective experience, I feel that it is significant for Counselling Psychologists, as researchers and clinicians, to be well-informed of the collective patterns among individuals which could in turn be utilised to inform treatment methods (e.g., developing interventions that aim to improve specific emotion regulation strategies that might have been hindered by maternal or paternal rejecting parenting) as well as to offer a different perspective that might develop our understanding of human psychology further (e.g., the unique influence of fathers' rejection on adult-offspring emotion regulation and psychological health development). For this reason, this study employed a quantitative methodology specifically, multivariate regression analyses and structural equation modelling that is able to capture collective behavioural, emotional and cognitive patterns between individuals.

However, although I do consider the positivists value-free, axiological position, I disagree with their notion of absolute objectivity since all procedures are constructed by humans (whose intellectual mechanisms are innately imperfect) and, thus, involve errors (Robson, 2002). Thus, as objectivity is impossible (Morrow, 2007), I take a post-positivist, axiological position that acknowledges our ability to know reality with

conviction, but not perfectly (Popper, 2002a; 2002b). Consequently, the research's goal was to endeavour for objectivity in this study even though this goal cannot be achieved flawlessly.

I am also aware that my values and background on the research topic that I am investigating could influence the way I approach it and my observations (Robson, 2002). This informs my aim to disclose the intent of the research to participants by advising them on the topic of the research (perceived parental behaviours and their influences on psychological health) in which they will be taking part as it is a socially value-laden topic.

In a similar vein, although I consider the inherent fallibility of the measurement procedures and instruments used in this study as humanly constructed (Robson, 2002), I nevertheless also take into account that the methodology of this study is based on strong theoretical frameworks (IPARTheory and the Process-Focused Emotion Regulation Model), which have undergone modifications to address previous criticisms (Ki, 2015; Rohner, 2004; Khaleque, 2017a; Rohner & Khaleque, 2010). It has thus far survived researchers' examination to approach the relative 'truth' of phenomena studied (Khaleque, 2013; Khaleque, 2015c; Khaleque & Ali, 2017; Gross & John, 2003; Gross et al., 2006).

Critical reflections on specific methodological issues identified within the acceptance-rejection and emotion regulation literature consulted

In this section, a critical reflection on specific methodological limitations identified in the literature review and how these will be methodologically addressed is presented.

Measures

A criticism of parental acceptance-rejection research pertains to the validity and reliability of retrospective self-reports, which is an important matter for the current study as its methodology involves retrospective, self-report measures. These methods inquire about participants' perceptions of their childhood experiences and investigate their responses in relationship to the investigated variable(s) (Dong, Anda, Felitti, Dube, Williamson, Thompson, Loo, & Giles, 2004; Downey & Feldman, 1996; Parker 1990; Rohner & Khaleque, 2005a).

Research has found that the most important problem regarding the reliability of retrospective self-report methods derived from individual recall failures (Moffitt, Caspi,

Taylor, Kokaua, Polanczyk & Poulton, 2009). However, whilst it is vital to acknowledge that memory is affected by past or present mood states, or fades over time and thus produces imprecisions (Brewin, Andrews, & Gotlib, 1993), reports of memory inaccuracy may be overstated (Coolidge, Tambone, Durham, & Segal, 2011). Fergusson, Horwood and Boden (2011) investigated recall bias, errors and unreliability in retrospective measures (self-reports) assessing childhood ill-treatment (sexual/physical abuse) and current mental health over 980 participants at ages 18 and 21. Structural equation modelling results showed a modest test-retest reliability of the retrospective reports ($r_{tt} = .50$) and less than one percent of report variance was attributed to recall bias. The researchers therefore concluded that possible error in measurement of early adversity using retrospective self-reports did not pose a substantial risk to the research's validity.

In addition, a longitudinal study conducted by Henry, Moffitt, Caspi, Langley, and Silva (1994) that investigated the subjective psychological states of 1,008 children showed 'moderately good' (p. 98) correlations (i.e., $r = .48$) between developmental and retrospective measures when the retrospective questions allowed for a general age range (e.g., 'prior to age 17') or assessed specific behaviours (e.g., shop lifting arrests as a teenager). Supporting this, the review by Coolidge et al., (2011) of Hardt and Rutter's (2004) meta-analysis involving 14 studies of retrospective recall of childhood experiences concluded that, although there are biases inherent in retrospective reports, validity is reasonably adequate as long as questions investigating the recalled behaviours are sufficiently specific and recall is not bound to narrow time periods. Finally, a cross-cultural meta-analytic review of 51 studies involving 6,898 participants found that self-report instruments that measured parenting practices were highly reliable (Khaleque & Rohner, 2002b).

Therefore, in the present study, both maternal and paternal behaviours will be measured with the Parental Acceptance-Rejection Questionnaire for adults (Rohner & Khaleque, 2005). The PARQ measures the adult's perception of father's and mother's acceptance-rejection in his/her childhood, assessing specific behaviours during the ages of seven to 12 (since after the age of approximately six to seven retrospective reports are more reliable as memories) that are frequent and well consolidated (Menon, 1994). Furthermore, The PARQ has been found cross-culturally reliable and valid (e.g., Machado & Machado, 2012; Gomez & Rohner, 2011) with alphas (α) coefficients exceeding .80 (Khaleque & Rohner 2002; for a review, see Rohner & Khaleque 2005a).

The PARQ instrument is part of a multi-methodological research approach that was utilised to research and validate the main postulates in Rohner's (2014) IPARTheory (for a review of the different methodological research approaches that researched and validated the main assumptions of IPARTheory, see Rohner, 2015; Khaleque, 2018). Thus, by using the PARQ, the present study also addresses criticisms of previous father-child research in regards to the under-employment of theory that determined the choice and measurement of the investigated variables (Lamb, 2010) and methodological limitations concerning the utilisation of dissimilar measures; thus their results were neither a suitable basis for social or clinical decision-making, nor for the comparison with other studies investigating similar phenomena (Sarkadi et al., 2007).

Similar criticisms concerning measurement and definition have been raised in research that investigated the effects of parental socialisation on offspring's emotion regulation development (for a review, see Bariola et al., 2011). Indeed, emotion regulation studies have been criticised due to the lack of consensus in conceptualising emotion regulation strategies and means of measuring these concepts (Cole et al., 2004; Bridges et al., 2004; Calkins & Johnson 1998; Eisenberg et al., 2001a, 2005; Greenberg et al., 1999). As Betts et al., (2009) noted, this ambiguity produces a lack of consistency across research that evaluates the effects of parental socialisation on offspring's emotion regulation thereby comparing findings is difficult.

Thus, the present study employed the well-established Process-Focused Emotion Regulation Model by Gross (1998b). This model has been extensively researched by operationalising the strategies of reappraisal and suppression with the Emotion Regulation Questionnaire (ERQ – Gross & John, 2003), which was found valid and reliable cross-culturally (e.g., David, Nakagawa & Yoo, 2008; Cabello, Rosario, Salguero, Fernandez-Berrocal & Gross, 2013; Spaapen et al., 2014; Moore, Lori & Niklas, 2008; Masumoto et al., 2016; Enebrink et al., 2013; Ali & Alea, 2018). For example, Enebrink et al., (2013) showed good and acceptable internal consistencies (Cronbach's alpha) for the ERQ subscales of reappraisal ($\alpha = .81$) and suppression ($\alpha = .73$), respectively, in a Swedish sample ($n = 1,433$). Similarly, Masumoto et al., (2016) reported good internal consistency for the reappraisal subscale ($\alpha = .83$) and adequate internal consistency for the suppression subscale ($\alpha = .75$) in a Japanese adult sample ($n = 936$).

Utilising measures such as the PARQ, and ERQ, which are based on strong theoretical frameworks, make possible comparisons between this study's findings and the outcomes of other studies examining similar variables, thus fulfilling a requirement of post-positivist research in order to be subjected to the process of falsification (Popper, 2002a).

Sampling

Sampling was another relevant methodological issue to consider. For example, Morris et al., (2007) noted that most of the research on the specific influences of parental rejection on emotion regulation abilities has employed middle-class American, and European American populations (e.g., Amato & Gilbreth, 1999; Tacon & Caldera, 2001), thus neglecting research on lower SES. For example, Pleck (1997) has found that poverty or race has a significantly larger effect on offspring than paternal parenting, although other studies show no effect of SES on paternal parenting (Veneziano, 1998). In addition, Smrtnik and Prosen (2016) noted that there is an absence of research on the effects of SES on the emotion regulation strategies of reappraisal and suppression and that the few studies that were conducted found that SES played a significant role in the use of the emotion regulation strategies of reappraisal and suppression, such as that lower SES adult participants utilise suppression more than adults with a higher SES. As Chetan (2017) suggested, measuring SES is important as it can affect the theoretical model being studied. Thereby, due to the few and mixed findings of research examining SES influences on psychological health and on the use of reappraisal and suppression, the present study has controlled for the effects of this variable by asking participants to indicate their parent' SES, in other words, whether their parents had a lower, middle, higher or upper SES whilst they (participants) were growing up. Research has shown that subjective SES measures as opposed to objective SES measures have been found to have stronger associations with several psychological and physical health indicators (Adler, Epel, Castellazzo, & Ickovics, 2000; Singh-Manoux, Marmot, Adler, 2005).

In addition, a review of more than 148 studies noted that samples on the majority of these studies were small, and employed children and adolescents. When adult offspring were present, then their average age range was 19 years old and mostly college students, thus limiting the generalisability of results to a special population and the early years of adulthood (Rohner & Veneziano, 2001).

Finally, the present study's literature review revealed that most of the father-child studies did not control for father's cohabitation (e.g., Barber & Thomas, 1986; Emmelkamp & Karsdorp, 1987; Brook & Brook, 1988; Greenberger & Chen, 1996; Millen & Roll, 1997; Tacon & Caldera, 2001; Lamb, 2010). Research has shown that when fathers are present on a daily basis (i.e., cohabitating) children tend to feel more accepted and receive warmth by significant caregivers (e.g., mothers, siblings, grandparents) to a greater degree, showing at the same time the socialisation effect of fathers (e.g., Rohner & Rohner, 1980). However, other research has shown that father's residence is not important for offspring's psychological health but marital conflict (e.g., Kelly, 2000) perceived abandonment and reduced availability are significant (e.g., Thompson & Laible, 1999). For example, children of divorced parents seem to do better psychologically when a meaningful relationship is sustained with both parents unless interpersonal conflict is high (Lamb & Kelly, 2009). Since research is inconclusive regarding whether fathers' cohabitation is important for offspring's psychological health development, this study will also control for this variable (i.e., father's cohabitation) by including only participants who have been living with their parents until the age of 12 since the study's measures require participants' retrospective accounts of childhood experiences.

Therefore, self-selected sampling (i.e., individuals coming forward after seeing the study's recruitment ads) in an attempt to recruit adults (18 plus) from diverse SES and ethnic backgrounds who have had both parents living with them until they were at least 12 years of age will be employed. This was achieved by placing adverts in public libraries, cafés, and restaurants in diverse socioeconomic boroughs of London (identified by the London's Poverty Profile Report – Aldridge, Bushe, Kenway, MacInnes, & Tinson, 2013) and posted on Facebook. These adverts directed participants to [surveymonkey.com](https://www.surveymonkey.com), where the research questionnaires were completed. The reasons for placing adverts on diverse socioeconomic areas was that research has shown that more 'non-White' than 'White' individuals (Voight, Koepsell, & Daling, 2003), and individuals who are less educated and less affluent are less likely to take part in surveys than educated and affluent individuals (Goyder, Warriner & Miller, 2002). A further reason for using Facebook as a recruitment platform in the present study was because research has shown that men are less likely than women to participate in surveys in person (Moore & Tarnai, 2002; Jackson, Ervin, Gardner & Schmitt, 2001) and especially in mental health surveys (Singleton & Lewis, 2003). The online nature of

the present study through Facebook intended to minimise the differences between gender participation as Facebook was readily accessible and would potentially be seen by equal numbers of both men and women.

Sample size

Garson (2015) noted that the sample size in SEM analysis has been a controversial issue. For example, Hoyle (1995) suggested SEM analysis should include 100 to 200 cases at least. Likewise, Loehlin (1992) proposed a sample size of 100 and if possible of 200 cases is enough for SEM analysis; however, Kline (2015) notes that SEM analysis with 100 to 200 cases will not yield significant results due to weak power. After reviewing studies that used SEM analysis, Schumacker and Lomax (2004) concluded that a sample size of less than 250 cases in SEM will not detect significant effects and recommended a sample size of 500 cases. Similarly, Bandalos (2014) found that SEM analysis with less than 200 cases were related to inflated Type I errors and serious standard error bias, therefore he also recommended at least 500 cases for SEM to have sufficient power to detect significant effects. Furthermore, Mitchell (1993) suggested that there should be at least 20 times as many cases as variables in SEM analysis. Finally, Luebbe et al., (2013) has shown that significant effects can be obtained using similar scales and measurement instruments/statistical analyses with 247 participants.

After taking into consideration the sample size in Luebbe et al.'s (2013) study, Schumacker and Lomax (2004) and Bandalos (2014) recommendations to have at least 500 cases when performing SEM tests and Mitchell's (1993) suggestion that there should be at least 20 times as many cases as variables in SEM analysis, the present study aimed to recruit 500 participants in order to obtain significant effects from conducting SEM analysis.

Confidentiality and truthfulness of responses

One of the most important matters in survey studies can be realised in Hyman's (1944) research title, 'Do they tell the truth?'. Research has shown that the quality of questionnaire data is worrying when the behaviour asked might be perceived as sensitive, stigmatising or embarrassing (Becker & Bakal, 1970; Tourangeau & Yan, 2007). In regards to the current research, the main phenomenon to be researched may be characterised as highly personal and sensitive as it reflects memories of parental practices, which, if they were highly rejecting (e.g., abuse), might hinder participants from responding openly (Bradburn & Sudman, 1979). In addition, any questions

regarding psychological health might be considered to be stigmatising (Haghighat, 2001), also affecting the honesty of their responses. Social desirability and self-serving biases might also influence participants' responses to the current survey (e.g., Schwartz, Barton-Henry, & Pruzinsky, 1985). To minimise these issues, the present study will ensure anonymity and confidentiality of findings to encourage participants to feel free to answer questions as honestly as possible (Ong & Weiss, 2000). To fulfil this standard of anonymity, the researcher will not know the identity of the respondent, a technique which has been previously found to enhance truthful responses by more than 74% in sensitive, shameful or stigmatising questions (Ong & Weiss, 2000). Furthermore, the website surveymonkey.com supported anonymity by disabling links to participants IP addresses. This again may enhance the truthfulness of responses. In addition, the nature of online data collection will give participants the opportunity to complete the survey at a time they feel relaxed. In this way, mood state recollection effects might be minimised, although previous research examining similar concepts has shown that mood state during recollections did not significantly affect the reporting of parental practices in childhood and adolescence (Brewin et al., 1993).

Other considerations

Further criticisms indicate that the majority of research investigated the influences of maternal acceptance-rejection and emotion regulation, thus, few studies have explored and differentiated the contribution of each parent to the development of the offspring's emotion regulation and then only with infants, young children and teenagers (e.g., Volling, McElwain, Notaro, & Herrera, 2002; Zeman, Penza, Shipman, & Young, 1997; Jaffe et al., 2010). Consequently, interactions between offspring-father-mother could not be performed and explored (Rohner & Veneziano, 2001; Morris et al., 2007; Bariola et al., 2011). Furthermore, IPART theory explains the 21 percent of variability in adult's psychological adjustment and 26 percent of variability in children's psychological adjustment to be due to perceived parental rejection indicating the effects of parental rejection to be stronger in childhood than in adulthood (Khaleque & Rohner, 2002a). These results indicate that age might influence the relationship between perceived parental rejection and psychological health.

Finally, research has shown that psychotherapy can alleviate psychological and psychological distress (Beck, 2011; McKay & Wood, 2011) and that almost one third of people (28%) in the UK have had psychotherapy (BACP, 2014). As a result, early negative paternal/maternal experiences may not indicate high levels of current

psychological health problems (Bateman & Fonagy, 2012; Young, Klosko, & Weishaar, 2003). Thus, responses of participants in the present study on the psychological health problems measure might be low due to psychotherapy experiences despite having perceived early parental rejection. Participants' responses on these measures therefore might obscure the study's findings. For these reasons, the generalisability of findings might be obscured.

Therefore, the present study will attempt to control participants' age and counselling experience, and statistical analysis will attempt to differentiate the independent influence of paternal and maternal rejection on adult-offspring's emotion regulation strategies of reappraisal and suppression and general psychological health problems.

Reflexivity

My personal interest in the area regarding parent-child relations and their influences on adult-offspring psychological health and emotion regulation development was initially prompted by my bachelor studies in Psychology. Whilst a psychology student I came across Bowlby's (1969; 1980), and Winnicott's (1965) research suggesting that a child's emotional, behavioural and psychological development seems to be significantly influenced by the parent-child relations. I found Bowlby's (1969; 1977a) research fascinating and, whilst I continued research in this area, I began to reflect on my own relations with my parents as a child and how these might have influenced my own emotional and psychological development.

Although my psychology studies initially satisfied my theoretical curiosity on this subject, I felt, nevertheless, that I needed to explore this area further in order to understand how my early parental experiences might have influenced my well-being as an adult. I thought that the best place to pursue this subject would be in personal therapy. Indeed, with the help of personal therapy, I began to recognise how my perceptions about my early relations with my parents might have affected my way of relating to myself and others as an adult, which in turn might have had a negative effect on my mood and overall well-being. For example, I reflected whether some of my early experiences with both parents such as suppressing my emotions to 'keep the peace' or avoid rejecting parental responses had inhibited my emotional expression skills and my ability to reappraise situations and emotional experiences. Upon reflection, it seemed to me that although I was aware of being an adult with my parents miles away I sometimes

still handled emotionally laden interpersonal interactions similarly to how I had handled it in my childhood with my parents.

My interest in this area grew stronger when I became a counselling psychology student and especially whilst I was working with clients as a trainee counselling psychologist. Working in primary care, I noticed that the majority of my adult clients seemed to acknowledge their distressing relationship with one or both parents. I also observed that the majority of clients who sought psychological help had not only appeared to have common negative parental experiences (e.g., parental behaviours that were perceived as cold, neglectful, hurtful or aggressive) but also a common difficulty in regulating their emotions, such as not being able to reappraise a situation that they perceived negatively that they might have had in response to an ambivalent situation (e.g., someone not greeting them) or to suppress emotional expression in interpersonal interactions. These observations brought to mind my own parental experiences. Thus, my interest in finding out more about the specific processes that might indirectly mediate the relationship between adult-offspring psychological health problems and the parent-child relationship was further increased.

After I was able to locate related research on the effects of parents on overall emotion regulation child development, I noticed that the majority of research focused on the mother-child relationship and less so on the corresponding father-child relationship. In addition, I could not find research examining the parental effects on adult-offspring psychological health problems and the specific emotion regulation strategies of reappraisal and suppression. Finally, I was surprised that I was unable to identify research evaluating the emotion regulation strategies of reappraisal and suppression as potential mediators of the relationship between psychological health problems and perceptions of early parenting experiences, despite the fact that suppression (of thoughts/emotions), and reappraisal (or cognitive restructuring) are important teaching skills in Cognitive Behavioural Therapy (Beck, 2011), and Dialectical Behaviour Therapy (Mckay & Wood, 2011; McMain, Korman, & Dimeff, 2001). Therefore, I decided to investigate whether early experiences with parents influence adult-offspring's ability to regulate emotions and psychological health problems and whether emotion regulation was mediating the relationship between early parental experiences and psychological health problems.

Research Design

The present study was designed to employ a cross-sectional quantitative methodology with a between subjects design that entailed linear hierarchical multiple regression analyses and structural equation modelling. Specifically, the present research evaluated the relationship between perceived adult-offspring retrospective reports of maternal and paternal acceptance-rejection behaviours, adult psychological health problems and the emotion regulation strategies of reappraisal and suppression. Additionally, the present study tested whether reappraisal and suppression mediated the relationship between maternal and paternal rejection and adult psychological health problems. Descriptive statistics and bivariate correlation analyses were conducted with the International Business Machines Corporation's Statistical Package for the Social Sciences (SPSS) 24 (IBM, 2014). SPSS was also employed for conducting linear regression statistical procedures along with the IBM Analysis of Moments Structures 24 (AMOS 24 - IBM, 2014) for structural equations modelling building and analysis to test the study's hypotheses.

Participants and procedure

Adult participants were recruited for an online research project investigating the relationship between perceived adult-offspring retrospective reports of paternal and maternal rejection, adult psychological health and the emotion regulation strategies (e.g., reappraisal and suppression). Study recruitment employed self-selected and snowball sampling methods that involved the researcher placing the study's advertising flyer (see Appendix A) in public libraries, cafés, restaurants, shops, in and around London with permission from the venue and posting the study's link on Facebook. Existing participants were also asked to circulate the survey. Participants were recruited between January and May 2017.

The recruitment flier briefly described the nature and possible duration of the study, data confidentiality and participants' anonymity, listed the inclusion criteria, and included the online survey link (i.e., http://www.surveymonkey.co.uk/r/UEL_PsychD_Zac_V). Participants who clicked on the survey link were presented with the information sheet which described the study's procedures and aims, asked participants to verify that they were 18 or older, that lived with both their biological parents until they were 12 years old, and were interested in participating in the study (see Appendix B). On confirmation of this, participants were

required to read the information sheet, again confirm their adult status and then click next to receive the consent form (see Appendix C). This preliminary procedure helped to ensure that participants were legally capable of providing informed consent. Participants were also asked whether they had lived with both their biological parents until their 12th year of age. These verification questions employed a ‘logic’ style survey format, such that participants who were under 18 years of age, or had not lived with both their biological parents until their 12th year of age or did not provide consent were diverted to the end of survey page (to the debrief form see Appendix D) without receiving any survey questions. Participants who provided online consent and were of the legal age to consent then received the first survey question. The order of presentation of survey items was the same for all participants. Upon completion, participants were presented with a debrief form (see Appendix D) which summarized the research background and aims and provided a list of self-help resources. After the debrief form, participants were thanked and asked to press the ‘End and Exit of Survey’ button.

Measures

Demographic Variables/Questionnaire

The following demographic and descriptive variables were collected on the online survey: participant gender, age, ethnicity and SES (see Appendix E). Participants were also asked to indicate with a YES/NO answer whether they “have ever had weekly psychological therapy for more than three months”. Three months were chosen as the cut-off point since the National Institute for Health and Care Excellence (NICE, 2011) suggests at least 10 weekly psychological therapy sessions should be offered for a range of psychological health difficulties (e.g., anxiety disorders).

Parental Acceptance-Rejection Questionnaire - Sort Form

Participant’s recollection of perceived maternal and paternal rejecting rearing behaviours was measured with the short form of the Parental Acceptance-Rejection Questionnaire for Adults (PARQ; Rohner & Khaleque, 2005a; 2005b). The PARQ’s short form version entails 24 self-report items that asks participants to reflect on their parents’ accepting-rejecting behaviours towards them when they were approximately 7-12 years of age. The PARQ’s items are scored on a four-point Likert scale ranging from 1 (almost never true) to 4 (almost always true) (see Appendix F). The PARQ form measures accepting-rejecting behaviour across four empirically established subscales

(Rohner & Khaleque, 2005a; 2005b): 1) The warmth/affection subscale has eight items (e.g., ‘My mother/father said nice things about me’); 2) The hostility/aggression subscale has six items (e.g., My mother/father ‘hit me, even when I did not deserve it’); 3) The indifference/neglect subscale has six items (‘My mother/father paid no attention to me’); 4) The undifferentiated/rejection subscale has four items (‘My mother/father saw me as a big nuisance’). The total warmth/affection subscale score ranges from 8 to 32 with 8 revealing the lowest perceived warmth/affection in the parental relationship and 32 revealing the maximum perceived warmth/affection. The total hostility/aggression subscale score ranges from 6 to 15, with 6 revealing the lowest perceived hostility/aggression and 15 revealing the maximum perceived hostility/aggression. The total indifference/neglect scale score ranges from 6 to 15 with 6 revealing the lowest perceived indifference/neglect and a score of 15 revealing the maximum perceived indifference/neglect. The undifferentiated/rejection scale score ranges from 4 to 10 with 4 revealing the lowest perceived undifferentiated/rejection and a score of 10 revealing the maximum perceived undifferentiated/rejection. In order to reduce response bias, Rohner and Khaleque, (2005b) proposes that the scores indicative of the warmth/affection subscale be reverse scored to create a fourth rejection subscale score (coldness/lack of affection). The coldness/lack of affection subscale score is then added to the other three rejection subscale scores (hostility/aggression, indifference/neglect and undifferentiated rejection), to create a subscale total score of perceived rejection (Rohner & Khaleque, 2005a). The total rejection subscale score ranges from 24 to 96 with 24 revealing the lowest perceived rejection and a score of 96 revealing the maximum perceived rejection (Rohner & Khaleque, 2005b). Participants in this study were presented the PARQ form twice (see Appendix F): first, to provide answers relating to paternal behaviours (PARQF) and then to provide answers relating to maternal behaviours (PARQM). Except for the referent (mother and father), both PARQ versions were identical. Following the instructions from Rohner and Khaleque (2005b), a total subscale score was then created separately for the perceived maternal (PARQM) and paternal rejection (PARQF) in the present study. The total scores of the perceived maternal (PARQM) and paternal (PARQF) rejection were calculated, whilst the four individual rejection subscales were not investigated separately (see SPSS/excel files for raw data). This was because the study sought to identify levels of parental rejection overall, as opposed to examining specific types of rejection. According to IPARTheory (Rohner, 2015), ‘rejection’ (as perceived by the offspring) involves a combination of all four types of rejection. The short version of the PARQ form has been

validated cross-culturally with robust reliability and validity (Machado & Machado, 2012; Comunian, Maci, & Mabilia, 2012; Tsaounis, Giovazolias, & Mascha, 2012; for a review, see Khaleque & Rohner, 2005). For example, Machado and Machado (2012) reported excellent internal consistencies with alpha coefficients (α) of .90 for the maternal rejection subscale of the PARQ and .97 for the paternal rejection subscale of the PARQ, in a Portuguese university undergraduate sample. Likewise, excellent internal consistencies with alpha coefficients (α) of .91 for the maternal rejection subscale of the PARQ and .92 for the paternal rejection subscale of the PARQ, was reported in a Greek adult sample (Tsaounis et al., 2012). In the present study, internal consistency of the overall maternal rejection (PARQM) subscale ($\alpha = .93$) and paternal rejection (PARQF) subscale ($\alpha = .96$) scores were excellent and consistent with existing research as cited above.

Emotion Regulation Questionnaire

Participants' use of the emotion regulation strategies of reappraisal (ERQ_R) and suppression (ERQ_S) were measured with the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003). The ERQ entails 10 self-report items that ask participants to reflect on how they regulate and manage their emotions. The ERQ's items are scored on a seven-point Likert scale ranging from 1 (strongly disagreed) to 7 (strongly agreed) (see Appendix G). The ERQ measures emotion regulation behaviours across the two empirically established subscales of reappraisal (ERQ_R) and suppression (ERQ_S) (Gross & John, 2003). 1) The reappraisal subscale (ERQ_R) has six items that measure the ability to change a situation's meaning in such a manner that there is a change in the individual's emotional response (Gross, 2002) (e.g., 'When I want to feel less negative emotion, I change the way I'm thinking about the situation'). The suppression (ERQ_S) subscale has four items that measure efforts to lessen ongoing emotional expressive behaviour (e.g., 'I keep my emotions to myself'). To create a total subscale score of reappraisal (ERQ_R), items indicative of reappraisal are summed together. To create a total subscale of suppression (ERQ_S), items indicative of suppression are summed together (Gross & John, 2003). The total reappraisal subscale score ranges from 7 to 43, with 7 revealing the lowest use of reappraisal (ERQ_R) and 43 revealing the maximum use of reappraisal (ERQ_R). The total suppression (ERQ_S) subscale scores ranges from 4 to 28 with 4 revealing the lowest use of suppression (ERQ_S) and 28 revealing the maximum use of suppression (ERQ_S). In the present study, participants were asked to provide answers to all 10 items that entailed the use of

reappraisal (ERQ_R) and suppression (ERQ_S). Following the instructions of Gross and John (2003), the present study aggregated all items indicative of reappraisal to create a reappraisal (ERQ_R) subscale score and aggregated all items indicative of suppression to create a suppression (ERQ_S) subscale score (see SPSS/excel files for raw data). The ERQ has been widely employed in the larger emotion regulation literature and the psychometric properties of the ERQ dimensions of reappraisal (ERQ_R) and suppression (ERQ_S) were found robust, valid and reliable cross-culturally (e.g., Soto et al., 2011; Gunzenhauser et al., 2014; Matsumoto, 2006; Ehring et al., 2010; Bariola et al., 2012; Enebrink et al., 2013; Goldin et al., 2009; Gross & John, 2003; Srivastava et al., 2009). For example, Gunzenhauser et al., (2014) found good alpha coefficients for the reappraisal subscale ($\alpha = .85$) and acceptable alpha coefficients for the suppression subscale ($\alpha = .71$) in a German sample ($n = 327$). Similarly, Bariola et al., (2012) found good alpha coefficients for the reappraisal subscale ($\alpha = .84$) and acceptable alpha coefficients for the suppression subscale ($\alpha = .74$) in an Australian sample ($n = 944$). In the present sample, the ERQ demonstrated good internal consistency for the reappraisal (ERQ_R) subscale ($\alpha = .85$) as well as for the suppression (ERQ_S) subscale ($\alpha = .81$).

The Brief Symptom Inventory: General Psychological Health Problems Questionnaire

Participant's current general psychological health problems (GPHP) were measured with the Brief Symptom Inventory (BSI; Derogatis, 1993). The BSI entails 53 self-report items that ask participants to reflect on their levels of distress over the preceding seven days (i.e., 'How much has that problem distressed or bothered you during the past seven days including today?'). The BSI's items are scored on a five-point Likert scale ranging from 0 to 4 with a score of 0 indicating the least distress level and with a score of 4 indicating the maximum distress level (see Appendix H). BSI distress levels are measured across nine empirically established dimensions/subscales (Scherer & Cushman, 2001): 1) Somatization; 2) Obsessive Compulsions; 3) Interpersonal sensitivity'; 4) Depression; 5) Anxiety; 6) Hostility; 7) Phobic Anxiety; 8) Paranoia; 9) Psychoticism. To calculate each subscale scores separately, the values of the items (i.e., 0-4) that comprise each subscale are first aggregated and then divided by the number of the items in that subscale. For example, the depression subscale has six items and the sum is divided by six. To create BSI's general or overall psychological health problems level (GPHP), the sum total of the nine subscales plus four items that do not form a

unified dimension but are included by the BSI as configurable items (to facilitate calculating the general psychological health problems level) are added together and then divided by the total number (53) of responses (Derogatis, 1993). Following the instructions of the BSI's author (Derogatis, 1993), participants in the present study were asked to provide answers to all of the BSI items (i.e., 53) and then the researcher created a general psychological health problems (BSI_GPHP) subscale score (see SPSS/excel files for raw data). The general psychological health problems (BSI_GPHP) subscale was used for analysis (as opposed to using all nine subscales) since the present study's aim was to get a 'snapshot' of participants' overall psychological health at the time of testing. The BSI has been found valid and reliable cross-culturally in countries such as Italy (Leo, Frisoni, Rozzini & Trabucchi, 1993), Spain (Pereda, Forns & Pero, 2007), Greece (Louitsiou-Ladd, Panayiotu & Kokkinos, 2008), Azerbaijan (Kerlmova & Nermin, 2016), and Israel (Gilbar & BenZur, 2002). In particular, Kerlmova and Nermin (2016) found an excellent internal consistency ($\alpha = .95$) of the BSI in a sample involving 309 college students in Azerbaijan. Likewise, Louitsiou-Ladd et al., (2008) found excellent Cronbach's alpha coefficient ($\alpha = .96$) in a Greek adult sample ($n = 818$). In the present study, the BSI_GPHP total subscale demonstrated excellent internal consistency ($\alpha = .97$).

Ethics

Ethical approval for the current research study was obtained from the University Research Ethics Committee (UREC) of the East London University prior to collecting data (see Appendix I). The present research ensured participants' protection (e.g., confidentiality, anonymity) in relation to the online data collection and has taken steps in order to safeguard them against potential psychological distress resulting from the survey as well as providing information of their rights (see consent form, Appendix C).

Confidentiality

Participants were required to provide information on their demographics (e.g., age, gender, ethnicity, SES, and previous psychotherapy engagement). No identifiable information was collected. Participant confidentiality and anonymity during data collection was ensured in two ways. First, the survey responses were anonymous and the survey's IP address collection feature was disabled. Second, www.SurveyMonkey.com was a secure and encrypted data collection service at the time of data collection. SurveyMonkey uses SSL encryption to protect sensitive data as it

moves along communication pathways between the participant's computer and SurveyMonkey's servers. Protection of participants' data was ensured by storing the raw data on a password protected computer. Only the researcher had access to raw data. In addition, Survey Monkey stores data in a SOC 2, Type II audited facility, staffed and surveyed (retrieved online from <http://www.surveymonkey.com/mp/policy/privacy-policy/>). SurveyMonkey also ensured participants' raw data as its policy dictates not to use the information collected from the research in any way or sell or share the study's responses with third party advertisers or marketers. The British Psychological Code of Human Research Ethics (2014) indicates data should be kept confidential on a private password-protected computer and/or secure server for the minimum amount of time, which is usually five to seven years after a manuscript has been published (BPS, 2014). Thus, data will be erased after seven years by using a software-based method (data erasure) that overwrites and destroys data on hard disks or other digital media.

Psychological distress

The research topic (perceptions and memories of the parent-child relationship) could possibly be characterised as a personal and sensitive topic for some participants. Although it was highly unlikely, the nature of the research topic might have caused some participants to reflect on potentially unpleasant memories of parental practices and/or parental interactions and/or current unpleasant mood, which might have triggered unwanted negative feelings and/or memories. The survey questions themselves did not directly inquire about illicit parent-child interactions or experiences such as abuse or neglect, and participants were not asked open-ended or qualitative questions that could prompt the unexpected disclosure of harmful or unlawful activity to researchers. Although the risk of a participant experiencing psychological distress as a result of the survey was considered low, the researcher notified participants of this possibility in the participant information letter and also included a list of self-help resources in the debriefing form (see Appendix D).

Information was provided to participants on the consent form and debrief form in relation to available support services such as the British Association of Social Workers (BASW), the National Association for People Abused in Childhood (NAPAC), Support Line (confidential emotional support), Aurora Health Foundation (specialist therapy service for men and women adult victims of childhood abuse), The Survivors Trust (a national umbrella agency for over 135 specialist rape, sexual violence and childhood sexual abuse support organisations throughout the UK) and The National Association

for Mental Health (MIND). Finally, participants were provided with the researcher's and his supervisor contact information in the event they had any questions or concerns about the study.

Data Analytic Plan

The present study employed SPSS and AMOS model building software to conduct the statistical analyses required to describe and summarise participants' data and to test the study's hypotheses.

Descriptive statistics

SPSS was employed to conduct a quantitative and a categorical descriptive analysis to provide a summary of the basic characteristics of the sample's variables. Specifically, the quantitative descriptive analysis was used to capture the means and standard deviations for the variables of age. The categorical descriptive analysis was used to describe participants' characteristics for the variables of gender, ethnicity, SES and participant's previous psychotherapy experience.

Evaluation of main variables examined

SPSS is used to assess the variables of maternal (PARQM) and paternal (PARQF) rejection, reappraisal (ERQ_R) and suppression (ERQ_S) and psychological health (BSI_GPHP) scores for outliers. This was performed by standardising variables to check whether they contained values greater than ± 3.29 , in other words whether they fell outside a normal distributed range (Field, 2013). Participants' scores that were above $+3.29$ were excluded as they might bias the means of important variables (Tabachnick & Fidell, 2013)

The present study also evaluated the distribution of important variables by conducting an individual frequencies statistical analysis (Field, 2013) that measured the central tendency, dispersion, and distribution for the variables of perceived maternal (PARQM) and paternal (PARQF) rejection, reappraisal (ERQ_R), suppression (ERQ_S) and general psychological health problems (BSI_GPHP). Skewness and kurtosis was assessed based on the demarcation criteria of Curran, West, and Finch (1996) conventional thresholds for skewness ($-2 < \text{skewness} < 2$) and kurtosis ($-2 < \text{kurtosis} < 2$).

Bivariate correlations analysis

SPSS was used to conduct a bivariate correlation analysis using Pearson's formula (1895), as the study's data were parametric (Field, 2013; Cohen, Cohen, West, & Aiken, 2013), to describe the direction and strength of the relationships between the predictor variables of maternal (PARQM) and paternal (PARQF) rejection, the mediator variables of reappraisal (ERQ_R) and suppression (ERQ_S) and the outcome variable of general psychological health problems (BSI_GPHP). Field, (2013) indicated that if the study's predictors variables are highly correlated ($r > .80$ or $.90$) then it will be difficult to identify each variable's effects and they will have to be tested separately because of multicollinearity. Thus, it is important to test for significant correlations between the predictor variables before testing the study's hypotheses.

Confirmatory and exploratory analyses

Finally, SPSS was employed to conduct a series of hierarchical multiple regression analyses in order to test the study's confirmatory (H1, H2, H3, H4) and exploratory hypotheses (H5, H6, H7, H8). Hierarchical multiple regressions were employed so the change in R^2 between the focal predictors and covariates could be observed. AMOS 24 model building software was used to construct a structural equation model (SEM). SEM was chosen as the most appropriate method in order to test the study's mediation predictions (H9, H10) (Tabachnick & Fidell, 2013).

Confirmatory Analyses

Previous research has shown that maternal and paternal rejection was predictive of adult's offspring general psychological health problems (e.g., Veneziano, 2000; Khaleque & Rohner, 2012; Lamb, 2010). Psychological health problems were also found to be predicted by the adult's emotion regulation strategies of reappraisal (e.g., Campbell-Sills & Barlow, 2007) and suppression (Kashdan et al., 2006).

Thus, confirmatory analyses intended to confirm the validity, reliability and the generalizability of previous empirical findings. Confirmation of previous research with the current sample allows the evaluation of the relationship between maternal and paternal rejection and reappraisal and suppression and the evaluation of the potential reappraisal and suppression mediation effects on the relationship between maternal and paternal rejection and general psychological health problems. If findings are not aligned with previous research, then the present study might prompt further research in order to

investigate the extraneous variables involved in the mediating pathways between maternal and paternal rejection and general psychological health problems.

Therefore, three hierarchical multiple regression analyses were conducted to confirm the initial research aims. The first hierarchical multiple regression evaluated the relationship between maternal (PARQM) and paternal rejection (PARQF) and general psychological health problems (BSI_GPHP). General psychological health problems (BSI_GPHP) served as the DV. Maternal (PARQM) and paternal (PARQF) rejection served as individual predictors. The second individual hierarchical multiple regression evaluated the relationship between the emotion regulation strategy of reappraisal (ERQ_R) and general psychological health problems (BSI_GPHP). General psychological health problems (BSI_GPHP) served as the DV and reappraisal (ERQ_R) served as the individual predictor. The third individual hierarchical multiple regression evaluated the relationship between the emotion regulation strategy of suppression (ERQ_S) and general psychological health problems (BSI_GPHP). General psychological health problems (BSI_GPHP) served as the DV and suppression (ERQ_S) served as the individual predictor.

Exploratory analyses

Research has shown that higher maternal and paternal rejection was predictive of lower use of reappraisal and higher use suppression with children (Gunzenhauser et al., 2014) and adolescent (Jaffa et al., 2010) samples but not with an adult sample (Bariola et al., 2011). Research has also shown that psychological health difficulties are closely related to the maladaptive use of the emotion regulation strategies of reappraisal and suppression (Werner & Gross 2010). Furthermore, although previous research found that negative parenting behaviours may indirectly lead to emotional or cognitive changes in youth (such as emotion regulation deficits - Morris et al., 2007), which, in turn, may create or maintain psychological health difficulties such as anxiety (Niditch & Varela, 2012; Affrunti & Ginsburg, 2012; Nanda et al., 2012) the specific emotion regulation strategies of reappraisal and suppression as mediators of the relationship between the effects of maternal and parental behaviours and offspring's psychological health difficulties have not been investigated empirically.

Exploratory aims, therefore, were two-fold. The first aim evaluated the independent influence of early-perceived maternal and paternal negative behaviours on reappraisal and suppression on adult-offspring. By utilising an adult sample, the emotion regulation

literature showing the influence of perceived maternal and paternal negative behaviours on reappraisal and suppression use in childhood/teenage years will be extended to adulthood. In addition, confirmation of the current research's exploratory aims allows the evaluation of the mediating role of reappraisal and suppression on the relationship between maternal and paternal rejection and general psychological health problems. If these predictions are not materialised, then the present study might prompt the investigation of other potential extraneous variables that could be involved in the mediating pathways between maternal and paternal rejection and general psychological health problems.

For the first aim to be achieved, two individual hierarchical multiple regression analyses (regression four and five) to evaluate whether maternal (PARQM) and paternal (PARQF) rejection were predictive of reappraisal (ERQ_R) and suppression (ERQ_S) were conducted. The fourth individual hierarchical multiple regression evaluated the relationship between maternal (PARQM) and paternal (PARQF) rejection and the strategy of reappraisal (ERQ_R). Reappraisal (ERQ_R) served as the DV, and maternal (PARQM) and paternal (PARQF) rejection served as individual predictors. The fifth individual hierarchical multiple regression evaluated the relationship between maternal (PARQM) and paternal (PARQF) rejection, and the strategy of suppression (ERQ_S). Suppression (ERQ_S) served as the DV and maternal (PARQM) and paternal (PARQF) rejection served as individual predictors.

Structural equation modelling (SEM)

To achieve the second aim (mediation analysis), a SEM model was constructed to evaluate whether the emotion regulation strategies of reappraisal (ERQ_R) and suppression (ERQ_S) served as mediator variables in the relationship between maternal (PARQM) and paternal (PARQF) rejection (predictor variables) on general psychological health problems (BSI_GPHP) (outcome variable).

SEM was employed because it allows the possibility of building complex models where dependent variables can be predictor or mediator variables (such as the strategies of suppression and reappraisal) for other dependent variables (such as general psychological health problems). This allows the examination of indirect effects and mediation structures as opposed to multiple regressions that can test multiple correlated observed predictor variables but only one dependent variable (also observed) at any given time (Tabachnick & Fidell, 2013).

In addition, several mediation hypotheses in which each is tested with one mediator could lead to biased parameter estimates due to omitted variables (Judd & Kenny, 1981). Thus, when two mediators are included (such as both emotion regulation strategies of suppression and reappraisal), the possibility of parameter bias due to omitted variables is minimised. Finally, including two mediators allows the evaluation of the relative magnitudes of the particular indirect effects associated with each mediator simultaneously (Preacher & Hayes, 2008). Therefore, the emotion regulation strategies of reappraisal (ERQ_R) and suppression (ERQ_S) will be included in the present study's SEM.

SEM building

The present study followed the procedure described by Garson (2015) for model building and model trimming. Garson (2015) suggested to initially overfit the model (i.e., to include variables that are significant according to past findings/theory) and then change only one parameter at a time, thus to erase a non-significant structural path (based on the significance of the model's coefficients and theory). As the model's coefficients will change on each step, modifying the model one step at a time is important. The final model should fit the data well (i.e., non-significant paths should be removed). Due to model-building/trimming (adding/erasing paths), Ullman (2001) recommends the use of an alpha significance level of .01 ($p < .01$) to avoid a Type I error. The present analysis will adopt Ullman's (2001) recommendation.

Diagnostics – hierarchical multiple regressions and SEM

For assessing the parametric assumptions underlying the general linear regression model, multicollinearity, linearity, homoscedasticity, independent errors and normally distributed errors were appraised.

SEM shares the same assumptions concerning the regression models. Thus, if the assumptions of multicollinearity, linearity and homoscedasticity are met in the regression models, it will mean that they will also be met in the SEM (Kline, 2015). SEM, however, is particularly sensitive when data are missing, whether outliers are present, and whether the relationship between variables and their constructs is, linear and not correlated (Tabachnick & Fidell, 2013). Thus the present study will also check for the presence of missing data, outliers, and linearity among variables.

For assessing whether the model 'fits' the data accurately, statistical criteria of the chi-square (χ^2), the comparative fit index (CFI), the root mean square error of

approximation (RMSEA), and the standardised root mean square residual (SRMR) were employed (Hooper, Coughlan & Mullen, 2008; Schermelleh-Engel, Moosbrugger, & Müller, 2003).

A result at a .05 threshold indicates a good model fit (Barrett, 2007). Nevertheless, χ^2 is sensitive to sample size, which means that the χ^2 statistic always rejects the models with more than 400 cases (Bentler & Bonnet, 1980; Jöreskog & Sörbom, 1993). Therefore, χ^2 is not a good measure of testing the fit of the model with large samples (Hooper, et al., 2008) and Vandenberg (2006) has suggested that it is no longer indicative as a basis for evaluating model fit.

The CFI has to fall in the range from 0 to 1, and a value of .95 or higher would indicate a good model fit and a lower value will indicate an acceptable fit (Fan, Thompson, & Wang, 1999). CFI is least effected by sample size, assuming that all latent variables are not correlated and equates the sample covariance matrix with the null (independence) model (Fan et al., 1999).

A value of the RMSEA of about .05 to .10 would indicate a fair fit. Due to its sensitivity to the number of estimated parameters in the model, RMSEA is regarded in informative fit indices (Diamantopoulos & Siguaw, 2000) as it selects the model with the lesser number of parameters (Hooper et al., 2008).

The SRMR shows the standardised difference between the observed correlation and the predicted correlation. SRMR values range from zero to 1.0 with good a fit to be obtained with values less than .05 (Byrne, 1998; Diamantopoulos & Siguaw, 2000). Nevertheless values as high as .08 are considered acceptable (Hu & Bentler, 1999).

Chapter 4: Results

Descriptive statistics

A total of 1,515 participants provided informed consent. From those, 377 (24.8%) did not provide answers to all survey questions and were omitted from data analysis with ‘select cases’ procedures since missing values might result in drawing inaccurate inferences about the data, their statistical estimates and the study’s hypotheses (Field, 2013). Among the 1,138 participants who provided answers to all survey questions, 14 (1.2%) provided responses on one or more subscales at ± 3.29 standard deviations above or below the variable’s respective means on a standardised distribution. These participants were considered univariate outliers and were omitted on a case-wise basis in order to aid the accuracy of parameter and statistical estimates (Tabachnick & Fidell, 2013). The present sample ($N = 1,124$), comprising full-cases without outliers was employed in the present data analysis (see SPSS output).

The present sample ($N = 1,124$; $M = 35.8$ years, range: 18-76 years, $SD = 12.24$), sex was: **1)** 902 females (80.2%); **2)** 215 males (19.1%); **3)** 7 transgender (0.6%). The sample’s ethnic/racial background was: **1)** 399 (35.5%) ‘other White’; **2)** 358 (29.3%) ‘White English’; **3)** 254 (22.6%) ‘White British’; **4)** 43 (3.9%) ‘other’; **5)** 38 (3.1%) ‘other Asian’; **6)** 19 (1.7%) ‘British Asian’; **7)** 10 (0.9%) ‘White and Asian’; **8)** 9 (0.8%) ‘Black British’; **9)** 7 (0.6%) ‘Black African’; **10)** 6 (0.5%) ‘White and Black Caribbean’; **11)** 5 (0.4%) ‘Arab’; **12)** 4 (0.3%) ‘White and Black African’; **13)** 3 (0.2%) ‘Black Caribbean’; **14)** 3 (0.2%) ‘other Black’.

The sample’s SES was: **1)** 206 (18.3%) lower SES; **2)** 722 (64.2%) middle SES; **3)** 173 (15.4%) higher SES; **4)** 23 (2%) upper SES. The sample’s previous psychotherapy experience was: 324 (28.8%).

The categorical descriptive analysis of gender showed that the transgender sample was small ($n = 7$, 0.6%). Due to the small number of participants in this group, multiple regression or SEM results testing the particular group would not have been valid (Field, 2013). Moreover, the model coefficients for gender in the multiple regressions and SEM analysis can become meaningful if gender is treated as a dichotomous/binary variable (i.e., males/females). Therefore, the present study decided to exclude transgender participants from regression and SEM analysis and to construct a binary gender variable subscale. The sample’s gender variable was: 902 females (80.8%) and 215 males (19.2%).

The categorical descriptive analysis of ethnicity showed an unequal/low number, in the 'non-White' groups (e.g., $n = 5$, in the 'Arab' group). Again, multiple regressions or SEM analysis testing the ethnic groups with a small sample size would not have been valid (Field, 2013), and the model coefficients for the different ethnic groups in the results would not have been meaningful. The present study therefore transformed ethnicity to a binary variable subscale by aggregating all 'White' participants together and all 'non-White' participants together (excluding transgender participants). The sample's ethnicity subscale was: 976 'White' (87,4%) and 141 'non-White' (12.6%).

The categorical descriptive analysis of SES showed a low number on the upper SES group ($n = 22$, 2%) as opposed to the other three SES groups. To have more equal numbers in SES groups, the researcher aggregated the higher and the upper SES groups together. Thus, an SES subscale with three levels was constructed. The sample's SES was: 1) 204 (18.3%) lower SES; 2) 717 (64.2%) middle SES; 3) 196 (17.5%) higher SES. The sample's previous psychotherapy experience was 322 (28.8%).

Evaluation of main variables for normal distribution

The observed variables of paternal and maternal rejection, reappraisal, suppression and general psychological health problems showed no significant deviation from the normal distribution (see Table 4.1) based on Curran et al., (1996) demarcation criteria for skewness and kurtosis thresholds.

TABLE 4.1. Descriptive statistics: mean, mean confidence interval levels, median, standard deviation, skewness, kurtosis and their standard errors of paternal and maternal rejection, reappraisal, suppression and general psychological health problems scores ($N = 1,117$).

Variable	<i>M</i>	95% CI	Median	<i>SD</i>	Skew	<i>SE</i>	Kurtosis	<i>SE</i>
Perceived paternal rejection	47.45	[46.43, 48.46]	44	17.29	.66	.07	-.36	.14
Perceived maternal rejection	43.51	[42.46, 44.56]	38	17.87	.91	.07	-.01	.14
Suppression strategy	27.59	[27.18, 27.99]	28	6.91	-.37	.07	.05	.14
Reappraisal strategy	14.97	[14.64, 15.30]	15	5.66	.03	.07	-.70	.14
General psychological health problems	.277	[.265, .288]	.230	.19	.80	.07	.08	.14

Note. *M* = mean; CI = confidence interval levels; *SD* = standard deviations; *SE* = standard error.

Bivariate correlations

Bivariate correlations results (see Table 4.2) revealed a significant positive relationship between paternal rejection (PARQF) and maternal rejection (PARQM); a significant positive relationship between paternal rejection (PARQF) and suppression (ERQ_S); a significant positive relationship between paternal rejection (PARQF) and general psychological health problems (BSI_GPHP); a significant negative relationship between paternal rejection (PARQF) and reappraisal (ERQ_R); a significant positive relationship between maternal rejection (PARQM) and suppression (ERQ_S); a significant positive relationship between maternal rejection (PARQM) and general psychological health problems (BSI_GPHP); a significant negative relationship between maternal rejection (PARQM) and reappraisal (ERQ_R); a significant negative relationship between reappraisal (ERQ_R) and suppression (ERQ_S); a significant negative relationship between reappraisal (ERQ_R) and general psychological health problems (BSI_GPHP); and a significant positive relationship between suppression (ERQ_S) and general psychological health problems (BSI_GPHP).

The correlation coefficient between perceived maternal and paternal rejection was significant ($r = .42, p < .01$), suggesting that fathers and mothers should be tested together on the multiple regression analyses because this moderate correlation does not suggest any substantial degree of multicollinearity (Field, 2013). If separate regression models for perceived maternal and paternal rejection effects had been conducted, potential significant effects of the parent who is not included in the analyses could have been missed.

TABLE 4.2. Pearson's correlation coefficient of paternal and maternal rejection, reappraisal, suppression and general psychological health problems scores ($N = 1,117$).

Variable	Perceived paternal rejection	Perceived maternal rejection	Reappraisal strategy	Suppression strategy	General psychological health problems
Perceived paternal rejection	—	.42**	-.19**	.21**	.36**
Perceived maternal rejection		—	-.10**	.17**	.33**
Reappraisal strategy			—	-.09**	-.31**
Suppression strategy				—	.33**
General Psychological health problems					—

Note. ** = $p < .01$.

Diagnostics

Hierarchical multiple regression models

To assess whether the hierarchical multiple linear regression models could be accurately interpreted, several regression assumptions such as the variable types, non-zero variance, multicollinearity, uncorrelated predictors with external variables, linearity and homoscedasticity, independent errors and normally distributed errors were evaluated.

Variable types and non-zero variance

Predictor and outcome variables were quantitative, continuous, unrestrained and their values were different. These factors, therefore, suggest that the regressions met the variable types and non-zero variance assumption (see SPSS data file).

Multicollinearity

The present study found no multicollinearity across all of the regression models after using Ringle, Wende, and Becker's (2015) recommendation for Variance inflation factors (VIF - i.e., inflated standard errors of regression coefficients). Ringle et al., (2015) suggested '5' as the maximum level of VIF to assess the multiple regression models' tolerance statistic. The VIF value in the regression models in the present study ranged between 1.023 and 1.339 (see SPSS output).

Linearity and homoscedasticity

The visual evaluation of the normal predicted probability plots (P-P plots) for each regression model showed that the assumption of homoscedasticity and linearity was met for all investigated variables (see SPSS output).

Independent errors

The Durbin-Watson's test statistic identifies the presence of autocorrelation in the residuals (prediction errors) when the Durbin-Watson value is substantially less than 2. In the present study's regression models, the Durbin-Watson statistic test value ranged between 1.862 and 2.074, therefore showing no autocorrelation in the residuals. Thus, the assumption of independent errors was met (Durbin & Watson, 1951) (see SPSS output).

Normally distributed errors

Histograms and P-P Plots were constructed to test for normally distributed errors (normal residual distribution). The histograms and P-P plots exhibited normally

distributed residuals revealing the normal distribution of the regression variables (see SPSS output).

Independence

Since participants appear to have taken part in the present research independently (self-selected sampling), any potential errors in the regression models are assumed not to be associated to each other, thereby meeting the assumption of independence.

SEM

In the present SEM analysis, the assumptions of multicollinearity, linearity and homoscedasticity that have been met in the regression models means that they have also been met in the SEM (Kline, 2015). In addition, the present SEM analysis involved a large sample ($n = 1117$), no missing data, no outliers, and the relationship between variables was linear and unidirectional (Garson, 2015). Moreover, since the model was not recursive (paths/arrows were unidirectional with no feedback loops), it can be expected that the covariance of disturbance terms was 0, meaning that unmeasured variables (which are causes of the endogenous variables) were not correlated with each other (Burnham & Anderson (1998).

The assumption of multivariate normality was only mildly violated and this violation was mitigated by the large sample size and the use of GLS estimation which has been shown to produce robust and unbiased results under this condition (Olsson et al., 2000).

Finally, the values of the comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the standardised root mean square residual (SRMR) showed (Hooper et al., 2008; Schermelleh-Engel, Moosbrugger, & Müller, 2003) a fair and an acceptable fit of the model.

The present study's model's χ^2 was, however, significant, a fact which indicated that the model was rejected. Nevertheless, the χ^2 statistic might have rejected the model since the sample size in the present study was large ($n = 1117$). As Bentler and Bonnet (1980) and Jöreskog and Sörbom (1993) indicated, the χ^2 statistic always rejects those models with more than 400 cases, and this does not mean that the model's fit was unsuccessful.

Confirmatory aims

The current study's confirmatory aims were chosen in order to replicate previous findings showing that maternal and paternal negative parenting behaviours were predictive of offspring's psychological health problems, independently (e.g., Padilla-

Walker et al., 2016; Wang & Kenny, 2014; Gomez & McLaren, 2006). To determine, the relationship between maternal (PARQM) and paternal (PARQF) rejection and adult-offspring's general psychological health problems (BSI_GPHP), a hierarchical multiple regression was conducted using forced-entry methods (i.e., predictors are forced/tested in the regression models at the same time). Studenmund and Cassidy (1987) suggested that forced-entry methods are the most appropriate methods to test a study's hypotheses as this technique does not require variables to be entered in any particular order; therefore, they are not influenced by random variation in the data.

The first hierarchical multiple regression, therefore, tested the relationship between maternal (PARQM) and paternal (PARQF) rejection subscale scores and general psychological health problems (BSI_GPHP) subscale scores. Maternal (PARQM) and paternal (PARQF) rejection subscales scores served as individual predictors and were entered in block two of the model. The general psychological health problems (BSI_GPHP) subscale scores served as the DV. Age, gender, SES, ethnicity and responses of participants who engaged in psychotherapy served as covariates and were entered in block one of the model.

It was hypothesised that (H1) higher maternal (PARQM) rejection subscale scores and that (H2) higher paternal (PARQF) rejection subscales scores would be significantly predictive of higher general psychological health problems (BSI_GPHP) subscale scores. Confirming previous findings, results showed that (H1) higher maternal (PARQM) rejection subscale scores significantly predicted higher general psychological health problems (BSI_GPHP) subscale scores and that (H2) higher paternal (PARQF) rejection subscales scores significantly predicted higher general psychological health problems (BSI_GPHP) subscale scores. Results also showed that age and psychotherapy engagement subscale scores also significantly predicted higher general psychological health problems whereas gender, ethnicity and SES subscale scores did not (see table 4.3).

Confirmatory aims also intended to replicate previous findings suggesting that the emotion regulation strategies of reappraisal and suppression were predictive of general psychological health problems (Aldao et al., 2010; Mennin et al., 2007). Therefore, to determine the relationship between the emotion regulation strategies of reappraisal (ERQ_R) and suppression (ERQ_S) and adult-offspring's general psychological health

problems (BSI_GPHP), two individual hierarchical multiple regressions (2 and 3) were conducted using forced-entry methods.

The second hierarchical multiple regression tested the relationship between reappraisal (ERQ_R) subscale scores and general psychological health problems (BSI_GPHP) subscale scores. Reappraisal (ERQ_R) subscale scores served as individual predictors and were entered in block two of the model. General psychological health problems (BSI_GPHP) subscale scores served as the DV. Age, gender, SES, ethnicity and responses of participants who engaged in psychotherapy served as covariates and were entered in block one of the model.

It was hypothesised (H3) that lower reappraisal (ERQ_R) subscale scores would be significantly predictive of higher general psychological health problems (BSI_GPHP) subscale scores. Confirming previous findings, results showed that (H3) lower reappraisal (ERQ_R) subscale scores significantly predicted higher general psychological health problems (BSI_GPHP) subscale scores. Results have also shown that age, gender, SES and psychotherapy engagement subscale scores significantly predicted higher general psychological health problems (BSI_GPHP) subscale scores whereas ethnicity was not significant (see table 4.4)

The third hierarchical multiple regression tested the relationship between suppression (ERQ_S) subscale scores and general psychological health problems (BSI_GPHP) subscale scores. Suppression (ERQ_S) subscale scores served as individual predictors and were entered in block two of the model. General psychological health problems (BSI_GPHP) subscale scores served as the DV. Age, gender, SES, ethnicity and responses of participants who engaged in psychotherapy served as covariates and were entered in block one of the model.

It was hypothesised (H4) that higher suppression (ERQ_S) subscale scores would be significantly predictive of higher general psychological health problems (BSI_GPHP) subscale scores. Confirming previous findings, results showed that (H4) higher suppression (ERQ_S) subscale scores significantly predicted higher general psychological health problems (BSI_GPHP) subscale scores. Results also showed that age, gender, SES and psychotherapy engagement subscale scores significantly predicted higher general psychological health problems (BSI_GPHP) subscale scores whereas ethnicity was not significant (see table 4.5).

Table: 4.3. Perceived paternal and maternal rejection predicting general psychological health problems ($N = 1117$).

	<u>Model 1</u>					<u>Model 2</u>								
	<i>B</i>	<i>SE (B)</i>	<i>B</i>	<i>T</i>	<i>P</i>	<i>Adj R2</i>	$\Delta R2$	<i>B</i>	<i>SE (B)</i>	β	<i>t</i>	<i>p</i>	<i>Adj R2</i>	$\Delta R2$
Age	-.002	.000	-.145	-4.894	< .001			-.003	.000	-.215	-7.778	< .001		
Gender	.005	.014	.010	.357	.721			.017	.013	.035	1.279	.201		
Ethnicity	.000	.002	.008	.266	.790			-.001	.002	-.013	-.504	.615		
Psychotherapy	-.045	.006	-.207	-7.080	< .001			-.025	.006	-.114	-4.159	< .001		
SES	-.032	.009	-.107	-3.613	< .001			-.006	.008	-.020	-.711	.477		
PARQF_total								.003	.000	.264	8.847	< .001		
PARQM_total								.003	.000	.247	8.095	< .001		
						.063	.067						.224	.161

Note: *B* = unstandardised regression weight, *SE (B)* = standard error of unstandardised regression weight, β = standardised regression weight, *Adj R2* = adjusted *R2*, $\Delta R2$ = *R2* change, PARQF_total = paternal rejection, PARQM_total = maternal rejection.

Table: 4.4. Reappraisal strategy predicting general psychological health problems ($N = 1117$).

	<u>Model 1</u>						<u>Model 2</u>							
	<i>B</i>	<i>SE (B)</i>	<i>B</i>	<i>t</i>	<i>P</i>	<i>Adj R2</i>	$\Delta R2$	<i>B</i>	<i>SE (B)</i>	β	<i>t</i>	<i>p</i>	<i>Adj R2</i>	$\Delta R2$
Age	-.002	.000	-.145	-4.894	< .001			-.002	.000	-.099	-3.447	.001		
Gender	.005	.014	.010	.357	.721			.029	.014	.058	2.045	.041		
Ethnicity	.000	.002	.008	.266	.790			.002	.002	.034	1.197	.231		
Psychotherapy	-.045	.006	-.207	-7.080	< .001			-.038	.006	-.178	-6.348	< .001		
SES	-.032	.009	-.107	-3.613	< .001			-.026	.009	-.085	-2.995	.003		
ERQ_Reappraisal								-.008	.001	-.298	-10.448	< .001		
						.063	.067						.146	.084

Note: Note: *B* = unstandardised regression weight, *SE (B)* = standard error of unstandardised regression weight, β = standardised regression weight, *Adj R2* = adjusted *R2*, $\Delta R2$ = *R2* change, ERQ_Reappraisal = Reappraisal strategy.

Table: 4.5. Suppression strategy predicting general psychological health problems ($N = 1117$).

	<u>Model 1</u>						<u>Model 2</u>							
	<i>B</i>	<i>SE (B)</i>	<i>B</i>	<i>t</i>	<i>P</i>	<i>Adj R2</i>	<i>ΔR2</i>	<i>B</i>	<i>SE (B)</i>	<i>β</i>	<i>t</i>	<i>p</i>	<i>Adj R2</i>	<i>ΔR2</i>
Age	-.002	.000	-.145	-4.894	< .001			-.002	.000	-.110	-3.905	< .001		
Gender	.005	.014	.010	.357	.721			.031	.014	.062	2.224	.026		
Ethnicity	.000	.002	.008	.266	.790			.001	.002	.019	.695	.487		
Psychotherapy	-.045	.006	-.207	-7.080	< .001			-.045	.006	-.207	-7.501	< .001		
SES	-.032	.009	-.107	-3.613	< .001			-.020	.008	-.067	-2.391	.017		
ERQ_Suppression								.011	.001	.333	11.951	< .001		
						.063	.067						.169	.106

Note: Note: *B* = unstandardised regression weight, *SE (B)* = standard error of unstandardised regression weight, *β* = standardised regression weight, *Adj R2* = adjusted *R2*, *ΔR2* = *R2* change, ERQ_Suppression = Suppression strategy.

Exploratory aims

Several studies have been conducted to evaluate the relationship between parental rejection and emotion regulation abilities of children and adolescents (Morris et al., 2007). Yet studies evaluating the relationship between maternal and paternal rejection and the emotion regulation strategies of reappraisal and suppression are sparse and have not been conducted with adult samples (Bariola et al., 2011).

To determine the relationship between maternal (PARQM) and paternal (PARQF) rejection and adult-offspring's emotion regulation strategies of reappraisal (ERQ_R) and suppression (ERQ_S) therefore, two individual hierarchical multiple regressions (4 and 5) were conducted using forced-entry methods. Maternal (PARQM) and paternal rejection (PARQF) subscale scores served as individual predictors in each regression (4 and 5) and were entered in block two of the model. The reappraisal (ERQ_R) subscale scores served as the DV in regression four and the suppression (ERQ_S) subscale scores served as the DV in regression five. In each individual regression, age, gender, SES, ethnicity and responses of participants who engaged in psychotherapy served as covariates and were entered in block one of the model.

The fourth hierarchical multiple regression tested the relationship between maternal (PARQM) and paternal (PARQF) rejection subscale score and reappraisal (ERQ_R) subscale scores. It was hypothesised that (H5) higher maternal (PARQM) rejection subscale scores and that (H6) higher paternal (PARQF) rejection subscales scores would be significantly predictive of lower reappraisal (ERQ_R) subscale scores. Consistent with the study's hypothesis (H5), results showed that higher maternal rejection (PARQM) subscale scores significantly predicted lower reappraisal (ERQ_R) subscale scores, and that (H6) higher paternal (PARQF) rejection subscales scores significantly predicted lower reappraisal (ERQ_R) subscale scores. Results also showed that age, gender and ethnicity significantly predicted lower reappraisal (ERQ_R) subscale scores whereas SES and psychotherapy engagement subscale scores were not significant (see table 4.6).

The fifth hierarchical multiple regression tested the relationship between maternal (PARQM) and paternal (PARQ_5) rejection subscale score and suppression (ERQ_S) subscale scores. It was hypothesised that (H7) higher maternal (PARQM) rejection subscale scores and that (H8) higher paternal (PARQF) rejection subscales scores would be significantly predictive of higher suppression (ERQ_S) subscale scores. Consistent

with the study's hypothesis (H7), results showed that higher maternal rejection (PARQM) subscale scores significantly predicted higher suppression (ERQ_S) subscale scores, and that (H8) higher paternal (PARQF) rejection subscales scores significantly predicted higher suppression (ERQ_S) subscale scores. Results also showed that age, gender and SES significantly predicted higher suppression (ERQ_S) subscale scores whereas ethnicity and psychotherapy subscale scores were not significant (see table 4.7)

Table: 4.6. Perceived paternal and maternal rejection predicting the strategy of reappraisal ($N = 1117$).

	<u>Model 1</u>						<u>Model 2</u>							
	<i>B</i>	<i>SE (B)</i>	<i>B</i>	<i>t</i>	<i>p</i>	<i>Adj R2</i>	$\Delta R2$	<i>B</i>	<i>SE (B)</i>	β	<i>t</i>	<i>p</i>	<i>Adj R2</i>	$\Delta R2$
Age	.088	.017	.156	5.225	< .001			.103	.017	.183	6.104	< .001		
Gender	2.799	.517	.160	5.416	< .001			2.496	.515	.142	4.847	< .001		
Ethnicity	.184	.062	.087	2.944	.003			.206	.061	.097	3.357	.001		
Psychotherapy	.744	.225	.098	3.309	.001			.420	.227	.055	1.852	.064		
SES	.791	.318	.074	2.491	.013			.353	.319	.033	1.106	.269		
PARQF_total								-.062	.013	-.156	-4.82	< .001		
PARQM_total								-.031	.013	-.079	-2.396	.017		
						.053	.057						.088	.036

Note: *B* = unstandardised regression weight, *SE (B)* = standard error of unstandardised regression weight, β = standardised regression weight, *Adj R2* = adjusted *R2*, $\Delta R2$ = *R2* change, PARQF_total = paternal rejection, PARQM_total = maternal rejection.

Table: 4.7. Perceived paternal and maternal rejection predicting the strategy of suppression ($N = 1117$).

	<u>Model 1</u>						<u>Model 2</u>							
	<i>B</i>	<i>SE (B)</i>	<i>B</i>	<i>T</i>	<i>p</i>	<i>Adj R2</i>	$\Delta R2$	<i>B</i>	<i>SE (B)</i>	β	<i>T</i>	<i>p</i>	<i>Adj R2</i>	$\Delta R2$
Age	-.049	.014	-.106	-3.542	< .001			-.069	.014	-.150	-5.009	< .001		
Gender	-2.225	.426	-.155	-5.222	< .001			-2.060	.420	-.143	-4.901	< .001		
Ethnicity	-.059	.052	-.034	-1.150	.250			-.080	.050	-.046	-1.605	.109		
Psychotherapy	-.009	.186	-.001	-.048	.962			.337	.185	.054	1.821	.069		
SES	-1.043	.262	-.119	-3.984	< .001			-.598	.260	-.068	-2.299	.022		
PARQF_total								.046	.011	.140	4.350	< .001		
PARQM_total								.051	.010	.160	4.862	< .001		
						.039	.043						.094	.056

Note: *B* = unstandardised regression weight, *SE (B)* = standard error of unstandardised regression weight, β = standardised regression weight, *Adj R2* = adjusted *R2*, $\Delta R2$ = *R2* change, PARQF_total = paternal rejection, PARQM_total = maternal rejection.

Mediation analyses

Bivariate correlations showed that the predictor variables of perceived maternal (PARQM) and paternal (PARQF) rejection effects were significantly correlated. Furthermore, multiple regressions results showed that perceived maternal (PARQM) and paternal (PARQF) rejection had a significant effect on general psychological health problems (BSI_GPHP) and on the emotion regulation strategies of reappraisal (ERQ_R) and suppression (ERQ_S). Correlation and multiple regression results, therefore, indicated the significance of testing for both maternal (PARQM) and paternal (PARQF) rejection effects as predictor variables together in one model. If separate analyses for maternal (PARQM) and paternal (PARQF) rejection effects are conducted, potential significant effects of the parent that are not included in the analysis might be missed. As Bariola et al., (2011) suggested, testing both mothers' and fathers' effects at the same time can determine each parental effect independently of one another. Furthermore, findings did not allow the examination of reappraisal (ERQ_R) and suppression (ERQ_S) as mediators of the relationship between maternal (PARQM) and paternal (PARQF) rejection and general psychological health problems (BSI_GPHP).

Structural equation multiple mediation modelling was therefore employed to simultaneously test the mediation or indirect effects of the emotion regulation strategies of reappraisal (ERQ_R) and suppression (ERQ_S) on the relationship between maternal (PARQM) and paternal (PARQF) rejection and psychological health problems (BSI_GPHP) and the direct effects of maternal (PARQM) and paternal rejection (PARQF) on general psychological health problems (BSI_GPHP).

Judd and Kenny (1981) suggest that, in testing two mediators on the same model, the likelihood of parameter bias due to omitted variables is minimised, and the assessment of the extents of the specific indirect effects associated with each mediator at once is maximised (Preacher & Hayes, 2008).

SEM construction

The present study's model (see conceptual model Figure 4.1) was constructed to include maternal (PARQM) and paternal (PARQF) rejection subscale scores as predictor variables. General psychological health problems (BSI_GPHP) subscale scores was the outcome variable. Reappraisal (ERQ_R) and suppression (ERQ_S) subscale scores were the mediating variables. The subscale scores of age, gender, SES, ethnicity and responses of participants who engaged in psychotherapy were included as covariates on

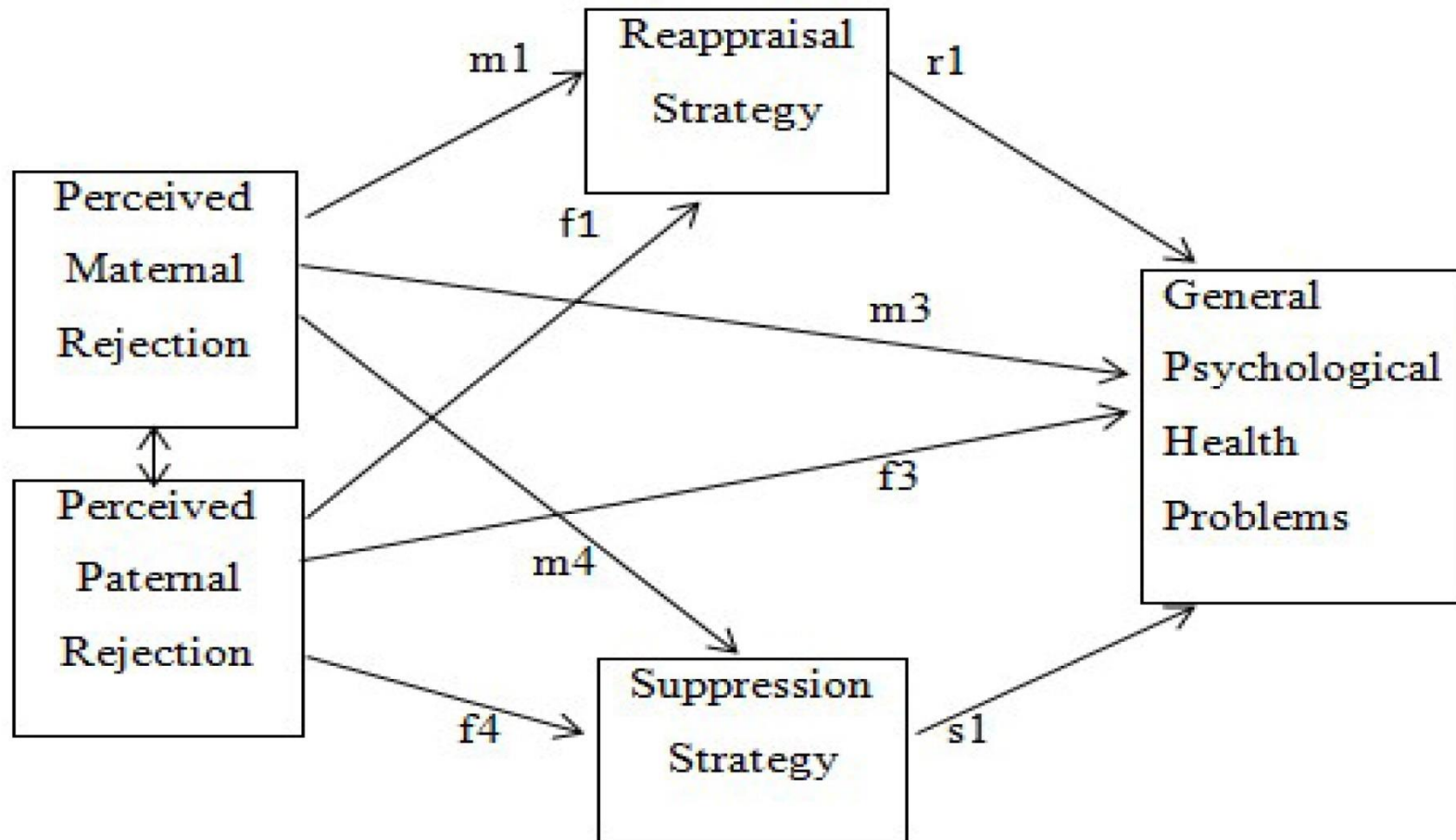
the general psychological health problems (BSI_GPHP) and on the reappraisal (ERQ_R) and suppression (ERQ_S) subscale scores, since they were found significant in the present study's multiple regression analyses. In addition, previous findings showed the relationship between parental behaviours, reappraisal and suppression and psychological difficulties to be significantly influenced by the effects of age (Eisenberg & Morris, 2002; John & Gross, 2004; Gross & John, 2003), gender (Masumoto et al., 2016), ethnicity (Gross & John, 2003; Butler et al., 2007), SES (Smrtnik & Prosen, 2016) and psychotherapy (Mckay & Wood, 2011). This was a further reason to include the subscale scores of age, gender, SES, ethnicity and responses of participants who engaged in psychotherapy as covariates on the general psychological health problems (BSI_GPHP) and on the reappraisal (ERQ_R) and suppression (ERQ_S) subscale scores.

It was hypothesised that reappraisal (H9) and suppression (H10) would significantly mediate the relationship between maternal (PARQM) and paternal rejection (PARQF) and general psychological health problems (BSI_GPHP).

An alpha level of .01 ($p < .01$) was utilised for the statistical analyses to avoid a Type I error due to model-building/trimming as recommended by Ullman, (2001). The alpha level of .01 was also used since a conservative alpha level is appropriate when results are produced in a large sample (Kline, 2015). SEM estimations were performed with the generalised least squares (GLS) because this estimation method is less vulnerable to model misspecifications and model coefficients are less biased compared to maximum likelihood estimation (Olsson, Foss, Troye, & Howell, 2000).

Estimated standard errors were calculated for all indirect and direct effects and four measures of model fit were calculated for all models: χ^2 , Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA) and the Standardised Root Mean Square Residual (SRMR).

FIGURE 4.1. Conceptual paths for the direct effects of maternal (m3) and paternal (f3) rejection on general psychological health problems and for the indirect effects of maternal and paternal rejection on general psychological health problems via reappraisal (m1 * r1, f1 * r1) and suppression (m4 * s1, f4 * s1).



SEM results

SEM building/trimming process involved the inclusion of variables (paths between predictor, mediator, outcome and covariate variables) that were found significant in the present study (multiple regression results) (see Figure 4.3 Appendix J). Then one parameter at a time was erased (i.e., a non-significant structural path based on the significance of the model's coefficients) (Garson, 2015). The SEM analysis performed nine cycles of trimming (removing a non-significant structural path on each cycle) before settling on the model that fitted well with the present study's data. The trimming process also took into account the literature review findings when removing non-significant paths.

The removal sequence of the non-significant paths was between the variables of: 1) Psychotherapy and reappraisal (ERQ_R); 2) Psychotherapy and suppression (ERQ_S); 3) SES and reappraisal (ERQ_R); 4) Ethnicity and suppression (ERQ_S); 5) SES and suppression (ERQ_S); 6) SES and general psychological health problems (BSI_GPHP); 7) Ethnicity and general psychological health problems (BSI_GPHP); 8) Reappraisal (ERQ_R) and general psychological health problems (BSI_GPHP); 9) Perceived maternal rejection (PARQM) and reappraisal (ERQ_R). No other paths were affected by the trimming procedure.

The final model showed a fair fit $\chi^2 = 169.960$ (13), $p < .001$; CFI = .71; RMSEA = .10; SRMR = .07. Standardised regression weights (see Table 4.3) indicated that the direct effects of perceived maternal (PARQM) rejection ($\beta = .17$) and paternal (PARQF) rejection ($\beta = .19$) on general psychological health problems (BSI_GPHP) were significant ($p < .001$). Standardised regression weights (see Table 4.3) also indicated that the direct effects of age on reappraisal (ERQ_R) ($\beta = .17$), suppression (ERQ_S) ($\beta = -.12$) and general psychological health problems ($\beta = -.13$) (BSI_GPHP), were significant ($p < .001$); that the direct effects of gender on reappraisal (ERQ_R) ($\beta = .14$), suppression (ERQ_S) ($\beta = -.12$) and general psychological health problems (BSI_GPHP) ($\beta = .09$), were significant ($p < .001$); and that the direct effect of psychotherapy on general psychological health problems (BSI_GPHP) ($\beta = -.10$) was also significant ($p < .001$).

Indirect (standardised) effects showed that the relationship between perceived paternal rejection (PARQF) on general psychological health problems (BSI_GPHP) was significantly mediated via reappraisal (ERQ_R) ($\beta = -.17 * -.22$) and suppression

(ERQ_S) ($\beta = .15 * .25$). Indirect effects also showed the relationship between perceived maternal rejection (PARQM) and general psychological health problems (BSI_GPHP) was significantly mediated via suppression (ERQ_S) ($\beta = .16 * .25$) but not via reappraisal (ERQ_R). Therefore, regression weights showing the path of the mediating effects of reappraisal (ERQ_R) on the relationship between perceived maternal rejection (PARQM) and general psychological health problems (BSI_GPHP) were not included in Table 4.8.

Likewise, the paths between the variables of ethnicity, SES and reappraisal (ERQ_R), suppression (ERQ_S) and general psychological health problems (BSI_GPHP) as well the path between perceived maternal rejection (PARQM) and reappraisal (ERQ_R) ($p > .01$), were non-significant and thus were not included in Figure 4.2.

TABLE 4.8. Un/standardised regression weights for the significant direct and mediation effects between the variables of reappraisal and suppression, maternal and paternal rejection and general psychological health problems and for the variables of age, gender and psychotherapy ($N = 1117$).

					Path	<i>B</i>	β	<i>SE</i>	<i>P</i>
Model									
Perceived maternal rejection	→	Suppression strategy	→	General psychological health problems	Indirect	.056 * .008	.16 * .25	.012	.001 <.001
Perceived paternal rejection	→	Reappraisal strategy	→	General psychological health problems	Indirect	-.071 * -.006	-.17 * -.22	.013	.001 <.001
Perceived paternal rejection	→	Suppression strategy	→	General psychological health problems	Indirect	.050 * .008	.15 * .25	.011	.001 <.001
Perceived maternal rejection			→	General psychological health problems	Direct	.056	.16	.012	<.001

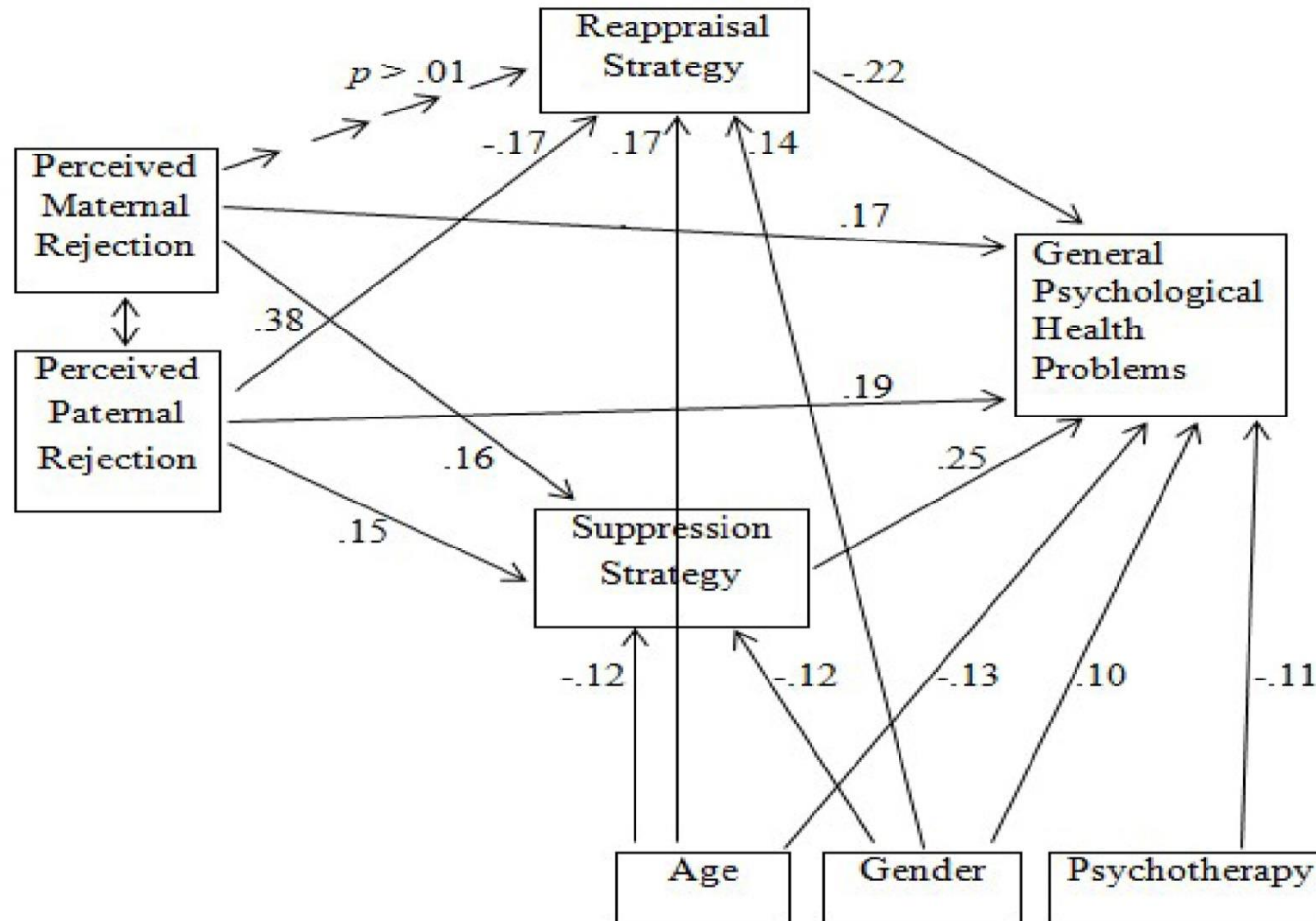
			Path	<i>B</i>	<i>β</i>	<i>SE</i>	<i>p</i>
Perceived maternal rejection	→	General psychological health problems	Direct	.002	.17	<.001	<.001
Perceived paternal rejection	→	Reappraisal strategy	Direct	-.071	-.17	.013	<.001
Perceived paternal rejection	→	Suppression strategy	Direct	.050	.15	.011	<.001
Perceived paternal rejection	→	General psychological health problems	Direct	.002	.19	<.001	<.001
Reappraisal Strategy	→	General psychological health problems	Direct	-.006	-.22	.001	<.001

			Path	<i>B</i>	<i>B</i>	<i>SE</i>	<i>p</i>
Suppression strategy	→	General psychological health problems	Direct	.008	.25	.001	<.001
Age	→	Reappraisal strategy	Direct	.103	.17	.018	<.001
Age	→	Suppression strategy	Direct	-.061	-.12	.015	<.001
Age	→	General psychological health problems	Direct	-.002	-.13	<.001	<.001
Gender	→	Reappraisal strategy	Direct	2.630	.14	.545	<.001

			Path	<i>B</i>	β	<i>SE</i>	<i>p</i>
Gender	→	Suppression strategy	Direct	-1.872	-.12	.446	<.001
Gender	→	General psychological health problems	Direct	.050	.10	.014	<.001
Psychotherapy	→	General psychological health problems	Direct	-.025	-.11	.006	<.001

Note. *B* = unstandardised regression weight, β = standardised regression weight, *SE* = standard error, *p* = probability value.

FIGURE 4.2: Standardised significant regression estimates for the direct and indirect effects between the variables of perceived maternal and paternal rejection, reappraisal and suppression and general psychological health problems and for the covariate effects of age, gender and psychotherapy ($N = 1,117, p < .001$).



Chapter 5: Discussion

This chapter begins by summarising and discussing the study's aims, hypotheses and findings. This is followed by a discussion of the study's clinical implications, a review of the limitations, future research directions, the study's strengths and finally, a summary of the study.

Overview and summary of the study's objectives

The objectives of the current research were twofold: (a) to confirm and extend previous research findings that show that perceived paternal rejection significantly influence offspring's psychological health and emotion development independently from perceived maternal rejection (e.g., Akun, 2017; Carrasco et al., 2014; Gunzenhauser et al., 2014) and (b) to investigate whether the emotion regulation strategies of suppression and reappraisal significantly mediate the relationship between perceived paternal and maternal rejection behaviours and adult-offspring's psychological health problems. These objectives were addressed by conducting a quantitative cross-sectional study with a between subjects design. Five hierarchical multiple regression analyses were conducted to test the first objective (a) and a SEM analysis was conducted to test the second objective (b). These objectives addressed the relative absence of research and previous methodological limitations on the differential effects of perceived maternal and paternal parenting on adult-offspring psychological health problems and emotion regulation strategies (reappraisal and suppression) and the absence of research in regards to the mediation effects of the emotion regulation strategies of reappraisal and suppression on the relationship between perceived maternal and paternal rejection and general psychological health problems.

Objective A: hierarchical multiple regression results

Higher perceived maternal (H1) and paternal (H2) rejection scores predicted higher participants' general psychological health problems scores, respectively.

In line with the study's hypotheses, the first hierarchical multiple regression results showed that the more rejecting adult-participants perceived their mothers and fathers to be whilst growing up, the more psychological health problems they reported. These findings were in accordance with previous research showing negative paternal parenting behaviours to significantly affect offspring's psychological health independent of

maternal parenting behaviours (Akun, 2017; Carrasco et al., 2014; Uddin et al., 2014; Putnick et al., 2015; Ahmed et al., 2012; Carrasco & Rohner, 2011; Veneziano, 2003).

Current results therefore add further support to the literature reviewed in the present study, showing the long-term detrimental effects of perceived paternal rejection on offspring's later psychological health, independently of the corresponding maternal rejection effects. The present study's results suggesting that early perceived parental rejection negatively affects current adult-offspring psychological health echoes research findings showing that perceived early rejection negatively affects the development of children's nervous systems (Ford, 2005) and the hippocampus, which is central to memory and emotion regulation (Luby et al., 2012), and therefore essential to psychosocial development. For example, Luby et al., (2012) found that the hippocampus is larger in size in preschool children who have had early experiences of maternal nurturance than that of children who have not had such experiences, indicating thereby the negative effects of negative parenting.

Lower reappraisal (H3) and higher suppression (H4) use significantly predicted adult-offspring's general psychological health problems

Confirming the present study's hypothesis (H3), the second hierarchical multiple regression result showed that participants, who used reappraisal infrequently, reported a higher level of general psychological health problems. Likewise, in line with the present study's hypothesis (H4), the third hierarchical multiple regression result showed that the participants who experienced a greater level of general psychological health problems were those who used suppression as their main emotion regulation strategy.

These results show that participants in the current study who reported a greater level of general psychological health problems tend to use reappraisal infrequently, which in turn suggests that they have fewer chances to alter how they feel/think in response to stressful experiences in their everyday lives. Consequently, they fail to alter the direction of the emotional experience/expression and reduce its behavioural and physiological effect (Gross, 2002; Gross & Thompson, 2007) that results in turn in the experience of a greater level of general psychological health problems (Werner & Gross, 2010).

In addition, participants in the present study who reported using suppression as their main strategy to deal with distressing emotions might contribute to the development or

intensify their existing psychological health problems (Mennin & Farach, 2007). This is because suppression does not essentially resolve emotional challenges, but instead sustains and/or further escalates negative emotional experience (Hayes & Wilson, 1994; Kashdan et al., 2006). Therefore, even if emotions are suppressed physiologically, they are fully experienced (Amstadter, 2008), a situation which in the long term leads to psychological health difficulties (Ehring et al., 2010).

The present findings provide support for studies suggesting that the infrequent use of reappraisal and the frequent use of suppression lead to less emotionally adaptive/healthy responses in dealing with everyday stressors, which in turn contributes to higher levels of psychological health problems (Sacher et al., 2012; Atmaca, 2011). Indeed, as Werner and Gross (2010) suggested, the emotion regulation strategies of reappraisal and suppression contribute to psychological health problems when they fail to alter the emotional response in a healthy manner (e.g., to reduce negative affect when no objective threat is present) or when short-term benefits in the relief of emotion (e.g., instant anxiety reduction) are greater than long-term costs. The present study therefore adds further support to past emotion regulation literature showing psychological health difficulties to be significantly affected by the low utilisation of reappraisal (e.g., Savostyanova & Kashdan, 2012; Garnefski & Kraaij, 2006) and frequent use of suppression (e.g., Ehring et al., 2010; Goldin et al., 2009).

Higher perceived maternal and paternal rejection significantly predicted adult-offspring's lower reappraisal (H5, H7) and higher suppression use (H6, H8)

Confirming the present study's hypotheses, the third and the fourth hierarchical multiple regression results showed that the higher adult's participants perception of maternal and paternal rejection during their childhood was, the lower was their use of reappraisal (H5, H7) and the higher their use of suppression (H6, H8). These findings were consistent with previous research outcomes thereby adding further support to the research of Jaffe et al., (2010) and Gunzenhauser et al., (2014), which found that higher levels of negatively perceived parenting corresponded to children's lower use of reappraisal and higher use of suppression.

The present study therefore reinforces previous studies (e.g., Bariola et al., 2011; Enebrink et al., 2013), identifying how caregiving environments that are nurturing and supportive inform adults' later use of these two emotion regulation strategies in the management of emotions. In addition, the present study provides support for previous

findings suggesting that an unsupportive early parental environment might create beliefs that emotions are not welcomed and should be suppressed (Sanders et al., 2015) and/or inhibit children's developmental capacity to reappraise situations (Eisenberg et al., 1996). The present study's findings are particularly significant in suggesting that parental rejection during childhood, as perceived by the adult, seems to have a long-term negative effect on the development of his/her emotion regulation strategies. In addition, the present findings address the absence of research on the differential effects of maternal and paternal parenting on adult-offspring emotion regulation strategies of suppression and reappraisal.

Objective B: mediation analysis findings

Reappraisal (H9) significantly mediated the relationship between perceived paternal (not maternal) rejection and general psychological health problems.

Suppression (H10) significantly mediated the relationship between higher maternal and paternal rejection and higher general psychological health problems;

The SEM mediation analysis has shown that the emotion regulation strategy of suppression significantly mediated the relationship between perceived maternal and paternal rejection and general psychological health problems. The SEM also revealed that the direct effect of mothers' and fathers' perceived rejection on general psychological health problems was also significant, a finding which indicates that suppression only partially mediated the relationship between perceived maternal and paternal rejection and adult-offspring's general psychological health problems.

The SEM results have also shown that the mediating effects of reappraisal were also significant but only for the relationship between perceived paternal rejection and general psychological health problems but not for the corresponding relationship for mothers. However, the direct effect of perceived paternal rejection on adult-offspring's general psychological health problems was also significant which indicates only a partial mediation of reappraisal. The partial mediation findings suggest that other processes apart from the emotion regulation strategies of reappraisal and suppression might indirectly influence (mediate) the relationship between perceived parental behaviours and offspring's psychological health problems (e.g., attentional deployment – Sheppes & Gross, 2011).

Nevertheless, even if the present results only revealed partial mediations, they are important as they not only showed that fathers significantly influence offspring's use of suppression but also that fathers (not mothers) have a unique influence on the use of offspring's reappraisal. The present findings support previous research suggesting fathers' unique and important role on children's emotion regulation development (Cabrera et al., 2007; Sarkadi et al., 2007; Owen et al., 2013; Stevenson & Crnic, 2013; Shewark & Blandon, 2015).

This result also provides support for previous researchers who have identified how a father's unique characteristics might help his children to regulate their emotions effectively (Mallers et al., 2010). For instance, research has shown that fathers (more than mothers) emotionally stimulate (e.g., prompt excitement and fear) their children, a response which in turn helps children to organise, control, adjust and regulate their intense emotions thereby boosting the children's overall emotion regulation development (e.g., Fletcher et al., 2013; Flanders et al., 2009; Paquette, 2004). Likewise, Leaper et al., (1998) found that, when fathers talk to their children, they use more composite forms of speech (e.g., more directives and imperatives) than mothers do, thereby significantly challenging children's linguistic and pragmatic capacities that are essential in social exchanges/interpersonal interactions. Thus, fathers indirectly teach their children to regulate stressful emotions deriving from social demands. Bögels and Phares (2008) found that fathers are seen by their children as the parent who guides them into the external social world, a findings that is also supported by research that shows that socially anxious children will observe their father's response rather than their mother's for how to interpret and act in ambiguous social situations (Bögels et al., 2010b). Perceived paternal rejection therefore might hinder the development of the emotion regulation strategy of reappraisal that is vital for dealing with stressful social interactions. Indeed, as the use of reappraisal is cognitive and more internal, thus less observable and less likely to be modelled or taught (as opposed to suppression) (Gross & John 2003), children who perceive their fathers as highly rejecting might miss the chance to be taught or model the use of reappraisal.

Differences between hierarchical multiple regression and SEM results for perceived maternal rejection on offspring's use of reappraisal

Interestingly, hierarchical multiple regression results showed that perceived maternal rejection significantly predicted adult-offspring's use of reappraisal, as opposed to SEM

results which showed no significant effects. This discrepancy might occur for several reasons. One reason might be that in SEM, as opposed to regression analyses, the emotion regulation strategies of reappraisal and suppression were tested simultaneously. Thus, a more accurate evaluation of the relative magnitudes of the particular effects associated with reappraisal and suppression (Kline, 2015) might have resulted in the non-significant findings.

A further reason might have been since SEM analyses in the present study utilised an alpha level of .01 ($p < .01$) rather than an alpha level of .05 to avoid a Type I error (see Ullman, 2001), due to model-building/trimming procedures that Garson (2015) advised in order to obtain the best fit for the model's data. Thus, results concerning the effects of perceived maternal rejection on the use of reappraisal showing an alpha level higher than .01 were not regarded as significant. In addition, the p-value for the coefficient of maternal rejection was .017 and therefore $> .01$ in the multiple regression model. Thus the path between maternal rejection and reappraisal was removed.

Age, gender, SES, ethnicity and psychotherapy engagement influences

Age

The present study's hierarchical multiple regressions and SEM analyses revealed that age exerted significant influences on the relationship between the effects of perceived maternal and paternal rejection on general psychological health problems. Specifically, results showed that the younger participants were, the higher the level of general psychological health problems they reported. This finding suggests that the level of general psychological health problems of participants' who perceived their mothers and their fathers as highly rejecting whilst growing up was significantly greater for younger rather than for older participants.

This finding reflects previous research outcomes, suggesting that the effects of perceived maternal and paternal rejection on psychological/psychosocial health and/or adjustment might be more pronounced on younger individuals and less influential as individuals age (Khaleque & Rohner, 2002a). A reason for maternal and paternal negative parenting effects on offspring' psychological health difficulties might be less pronounced in older individuals was put forward by Allen, Fonagy, and Bateman, (2008) and Schore (2012), who suggested that positive significant relationships later in life could dramatically alleviate an individual's adverse psychological and psychosocial effects due to negative early parental experiences. Therefore, older participants' positive

life experiences with significant others might have counteracted the effects of their perceived rejecting early parenting on the level of their general psychological health problems.

In addition, age was found to exert significant influences on the relationship between the strategies of reappraisal and suppression and general psychological health problems. Specifically, regression results showed that the younger participants were, the less they used the strategy of reappraisal and the higher the level of general psychological health problems they reported. Likewise, regression results showed that younger participants reported a higher use of suppression, and also reported a greater level of general psychological health problems.

These findings resonate with past research, suggesting that younger individual use reappraisal less and suppression more as an emotion regulation strategy to deal with everyday stressful interpersonal and social situations (e.g., Gross & John, 2002; 2003). The present outcomes also resonate with research showing that lower reappraisal use and higher suppression use were more likely to result in psychological and psychosocial health problems (Martin & Dahlen, 2005; Kashdan & Steger, 2006). The present finding seems to also support John and Gross's (2004) research showing that the older individuals become, the less they make use of suppression and the more they use reappraisal, thus highlighting the cumulative effects of life experience on the adaptive use of these two strategies.

SEM results showed that the older participants were, the more frequently they used the emotion regulation strategy of reappraisal as a mediator of the relationship between perceived paternal (not maternal) rejection and general psychological health problems. In contrast, the younger participants were, the more frequently they used the emotion regulation strategy of suppression as a mediator of the relationship between perceived mothers' and fathers' rejection.

Finally, age in the present study was also found to exert significant influences on the relationship between perceived maternal and paternal rejection and the emotion regulation strategies of reappraisal and suppression. Specifically, regression results suggested that the level of reappraisal use of participants' who perceived their mothers and their fathers as highly rejecting whilst growing up was significantly lower (i.e., less healthy) for older rather than for younger participants. SEM results showed that lower use of reappraisal was only predicted by perceived paternal rejection and not maternal

rejection, and that older participants used more reappraisal than younger participants. In regards to suppression, regression and SEM results have shown that younger rather than older participants made more use of suppression.

Gender

Gender was also found to exert significant influences on the variables of perceived maternal and paternal rejection, reappraisal and suppression and general psychological health problems. Specifically, hierarchical multiple regression and SEM results showed that female participants reported using reappraisal more frequently and suppression less frequently than male participants in order to regulate their everyday emotional experiences. This finding is in agreement with studies showing that men utilise suppression more than women (Stopa, & Bucks, 2014; Gross & John, 2003; Spaapen et al., 2014).

The reason for the differential use of suppression between men and women in this study might have been due to the different parental emotion socialisation behaviours (i.e., accepting-rejecting) to participant's emotional expressions whilst growing up. For example, Chaplin et al., (2005) found that fathers attended less to their sons' anxiety and sadness than to their daughters' anxiety and sadness. Similarly Cassano et al., (2007) found that mothers more than fathers felt less distressed when their sons expressed sadness and more upset when their daughters expressed sadness, a fact which determined their differential reaction to their daughters' and sons' emotional displays. In other words, mothers engaged in problem-focused responses more with their daughters' emotional displays than with their sons' emotional displays. Thus, men might have learned from a young age to suppress their emotions as they have not been attended to. Indeed, Sanders et al., (2015) found that parents who habitually behave unsupportively towards their children's emotions are creating beliefs that emotions are not welcomed and should be suppressed.

Similarly, parental emotion socialisation behaviours might be the reason that female participants in this study reported to significantly use more reappraisal to regulate their emotions than male participants did. The emotion regulation strategy of reappraisal is cognitive and more internal, thereby less observable and less likely to be modelled/taught (Gross & John, 2003). Since research showed that both parents attend more to the emotional expression of their daughters than that of their sons (Chaplin et al., 2005) and that both parents apply a problem-focused response to their daughter's

emotional displays rather than to their sons (Cassano et al., 2007), girls might have had more chances than boys to be explicitly taught how to use reappraisal to manage their emotions.

Furthermore, hierarchical multiple regression and SEM results showed that female participants experienced a higher level of psychological health problems than male participants and, as stated above, they have also reported using more reappraisal and less suppression to regulate their emotions. This study did not directly examine interactions between gender, general psychological health problems and reappraisal and suppression use so definite conclusions and predictions regarding the potentially moderating function of Gender as a variable for the causes and effects of suppression and reappraisal strategies cannot be drawn. However, a hypothetical reason for the finding that shows females reporting more psychological health problems than males despite using more reappraisal (i.e., healthy response) might be that reappraisal has a less positive effect on mood on women than on men (Masumoto et al., 2016) and that women require more conscious effort to use reappraisal as a strategy to deal with everyday emotional experiences whereas in men reappraisal use is automatic and with significantly less effort than in women (McRae et al., 2008). Antecedent-focused emotion regulation strategies such as reappraisal modify the emotional response inclination by taking place before its full activation (i.e., prior to the complete activation of behavioural and physiological responses), thus affecting the whole emotion-production process (Gross & John, 2004). Consequently, reappraisal can change the direction of the emotional experience/expression and can reduce or neutralise its behavioural and physiological effect (Gross, 2002; Gross & Thompson, 2007). Since women require conscious effort to reappraise their emotions, it can be hypothesised that reappraisal use in women might take place after the emotional expression is fully activated. Thus, its regulating effects might not be as strong as in men, thereby having no significant impact on women's psychological health problems.

The finding showing men to report using more suppression and less reappraisal (less healthy use of both strategies) and also to report experiencing fewer psychological problems than women in this study might also be due to men's use of reappraisal in an automatic manner (McRae et al., 2008). Thus, the frequency of reappraisal might not be as important but its automatic use might be in regulating stressful emotional experiences. Men reporting fewer general psychological health problems than women might be also due to men's parental emotion socialisation practices when they were

children and learned not to express but to suppress their distressing emotional experiences (Cassano et al., 2007; Chaplin et al., 2005). In turn, this practice might have resulted in men expressing their feelings less when growing up and also not seeking help to manage their emotional difficulties as compared to women. An 18-month longitudinal study conducted by Singleton and Lewis (2003) examining the psychological health of adult men and women (16 to 74 years old) in the UK has shown that women (29%) were more likely to have been treated for psychological problems than men (17%). Singleton and Lewis (2003) noted that this difference could be because women are more likely to report symptoms of psychological health problems than men, when asked. Support for Singleton and Lewis's findings was provided by the Mental Health Foundation Report (MHFR, 2016) that showed that women were three times more likely (26.0%) than men (9.1%) to report symptoms indicative of common psychological health problems (e.g., anxiety, depression, PTSD).

In addition, it is also possible that women just have more psychological problems to start with and these factors (e.g., societal factors – MHFR, 2016) were not included in the regression models and SEM. Thus, it appears that women engage more often in active coping strategies such as reappraisal than men. This would also explain why their general psychological health is worse than that of men. However, this is an open question that cannot be answered in this thesis.

Ethnicity and SES

Interestingly, hierarchical multiple regression findings showed that participants' ethnicity played a significant role only in the relationship between perceived mother and father rejection and reappraisal (not suppression) in that 'non-White' participants who reported experiencing a lower reappraisal use reported a higher early perceived maternal and paternal rejection than 'White' participants. However, ethnicity did not influence the effect of perceived maternal and paternal rejection on general psychological health problems. Finally, ethnicity did not influence the effect of reappraisal and suppression on general psychological health problems.

In addition, regression findings showed that participants SES (i.e., their parents' SES whilst they were growing up) was found to significantly influence the relationship between perceived maternal and paternal rejection and suppression (not reappraisal) and the relationship between higher suppression and lower reappraisal use and higher psychological health problems.

However, SEM analysis showed that SES and ethnicity exerted no significant influence on the relationships between perceived maternal and paternal rejection, the strategies of reappraisal and suppression and general psychological health problems. This lack of significance might reflect the mixed findings of previous studies showing inconsistent results regarding ethnicity (e.g., Matsumoto, 2006; Gross & John, 2003) and SES effects on the emotion regulation strategies of reappraisal and suppression (Smrtnik & Prosen, 2016) and parental behaviours (Pleck, 1997; Veneziano, 1998). Another reason for the SEM non-significant results might have been the unequal numbers within the SES (18.3 percent 'lower', 64.2 percent 'middle' and 17.5 percent 'higher' SES) and ethnicity (87 percent 'White' and 13 percent 'non-White') groups or due to the use of an alpha significance level of .01 ($p < .01$) instead of .05 (Ullman (2001).

Psychotherapy engagement

Moreover, the negative effects of lower reappraisal and higher suppression use on general psychological health problems found in previous research were further supported by the present study's identification of participants' engagement with psychotherapy. Specifically, hierarchical multiple regression results showed that participants who engaged in psychotherapy scored lower on the reappraisal and higher on the suppression measure and also scored higher on the general psychological health problems measure as opposed to participants indicating no psychotherapy engagement. This observation suggests participants who infrequently used reappraisal and frequently used suppression to deal with everyday emotional situations experienced a higher level of general psychological well-being/adjustment difficulties that they might have tried to resolve by engaging in psychotherapy.

Clinical Implications

The present findings suggest that paternal and maternal rejection during one's childhood could increase the risk for developing psychological health difficulties directly and indirectly through deficits in the use of suppression and reappraisal in adulthood. Importantly, the present results suggest that reappraisal significantly mediates the relationship between perceived fathers' (not mothers') rejection and offspring's general psychological health problems.

This is an important finding as it might encourage the inclusion of fathers in clinical research as well as raise awareness among trainee psychotherapists of fathers' influences on children's emotion regulation development and overall wellbeing in later

life in counselling psychology, social work and family training programs. In addition, child and family counsellors could develop intervention programmes that would educate fathers regarding potential influences of their parenting behaviours as well as to how to help their children in the development of emotion regulation strategies (Liew et al., 2011). Recognising fathers' significance on child development might also help to reduce the common incidence of 'mother blaming' for children's emotional, behavioural and overall psychological health problems. This would help to challenge the social sciences' dominant academic paradigm that espouses the concept of the dyadic – mother-child – view by offering an alternate triadic – father-mother-child – view (Lamb, 2010). Finally, the importance of the father-child relationship might further highlight the need to explore social policy implications of the significance of fathers in custodial decision-making.

Lastly, the present study advocates potential and specific therapeutic interventions in order to identify and help individuals who have difficulties in the use of reappraisal and suppression. For example, at the point of referral, a standardised clinical emotion regulation questionnaire could be posted or emailed prior to the initial assessment session. During the assessment session, the questionnaire could be then followed by clinical measures that explore clients' perceptions of their parental relationships. Thus, clinicians might be able to hypothesise and explore with clients how and to what extent their perceptions of early parental relationships might have led to the maladaptive use of emotion regulation strategies. These perceptions are important as clients' understanding of their psychological difficulties that are affected by the interplay of these processes might help to ameliorate feelings of self-blame.

After identifying emotion regulation difficulties, clinicians might then be able to develop specific treatment plans in which interventions can focus on educating clients about potential influences of early parent-child relations on emotion regulation development, and emotion regulation adaptive and maladaptive use. For example, clinicians could explain that when the frequent use of suppression and the sporadic use of reappraisal aim to cognitively detach or escape from thoughts/feelings, resolution of psychological and emotional distress is far less likely (Gross & Thompson, 2007). Thus, if the maladaptive use of these two emotion regulation strategies becomes the main way in which individuals deal with distress, then they might start to feel unable to cope (emotionally and or behaviourally) with stressful experiences, which in turn might cause or prolong psychological health difficulties (Gross & John, 2003).

Following the educational part of the treatment plan, therapists could then tailor interventions that aid clients' understanding of the specific costs associated with their individual emotion regulation use and the identification of any assumptions/beliefs regarding the use of emotion regulation. The therapist could then encourage clients to experiment with the use of these two strategies in session with the therapist or with others in between sessions.

However, clinicians must be aware that rather than generally discouraging the use of suppression or overly encouraging the use of reappraisal, it may be more beneficial to conduct a cost-benefits analysis with the client for each specific situation, followed by the setup of behavioural experiments to evaluate the consequences of these two strategies in each situation. Furthermore, clinicians have to be vigilant of when clients are using any of the emotion regulation strategies in the therapy session, in other words, in the 'here and now' since talking about feelings in a detached way and/or by using suppression for example will not be beneficial for healthy emotional and interpersonal functioning (Jazaieri et al., 2013). Patel and Patel, (2019) have noted that coming to terms with distressing feelings/thoughts that have been previously avoided might raise one's level of distress in the short term; however, the long-term benefits are far much greater as emotional stability, psychological health and a wider understanding of oneself and others is gained. Similarly Bateman and Fonagy (2016) stated both feelings and associated thoughts have to be present in order to be effectively explored for the achievement of a healthy emotional life.

Finally, clinicians should evaluate their own adaptive/maladaptive emotion regulation strategies use as to avoid colluding with the client's emotion regulation strategies maladaptive use. This collusion might result in therapy not being effective and lead to unresolved thoughts/feelings in sessions that in turn might lead to ruptures in the therapy relationship. Awareness of clinicians' own emotion regulation strategies use can be achieved by reflective practice with regards to these strategies, supervision, personal therapy, as well as by keeping informed of the relevant research in this area as well specific continual professional development seminars and experiential workshops.

If clinicians are aware of their own difficulties with the utilisation of emotion regulation strategies, they might be able to deepen their understanding of clients who present with emotion regulation difficulties. Indeed, if clinicians are more aware of their own difficulties in utilising these strategies and how to overcome them, they might be

more able to explore, encourage as well as to empathically confront clients who utilise them in a maladaptive way. For instance, when clients suppress the expression of anger or grief feelings, the clinician could point out to them the costs associated with their suppression by exploring the clients' feelings as they are unfolding in the 'here and now' (e.g., avoiding feelings of anger might give rise to anxiety, depression, guilt and corresponding physiological responses). As Mennin and Farach, (2007) have noted, for example, suppression of feelings (e.g., 'It's not good to feel angry towards my mother who is alone in this world' or 'I'm not going to show I'm upset about losing my job.') might give rise to maladaptive secondary emotional responses (e.g., guilt, fear, despair, embarrassment), which might in turn prompt the development of intensifying existing psychological health difficulties such as anxiety and depression.

Personal reflexivity of carrying out the present study

While reflecting on the long process of completing the present study, I got in touch with the fluctuating roller coaster of emotions that this journey entailed. Acknowledging these feelings has been part of this phase in my life as a trainee-counselling psychologist and as a researcher. Although staying with these feelings was a difficult task, the value of this experience was immense as it changed me as a person and as a therapist in ways that might not have been possible otherwise.

Thinking back and reflecting on this journey, I specifically remember a few times when I was experiencing strong feelings that were evoked by the nature of this research, in other words, while I reflected on my early parental experiences and their effects on my psychological health. The research reminded me of these early times and the feelings of pain and anxiety involved. These experiences were mostly present while I was researching the questionnaires that I used to measure parental rejection and completing the literature review. These periods have prompted difficult early memories and feelings of anger, grief and loss. For example, while researching and going over different measures that examined specific parental behaviours, I noticed I became slightly anxious as some of the items in these measures prompted specific early memories. I remember that at the same time I felt an immense sense of responsibility for the individuals who might participate in this study as their early experiences might be also triggered to an extent. This prompted me to include information with regards to organisations that might be able to support individuals who were affected by adverse

early experiences and/or current psychological health difficulties that the completion of this research might prompt.

The task of researching as well as writing the literature review brought about similar emotions and feelings and for some time periods I would find myself experiencing a wide range of negative thoughts and feelings that at times brought both the researching and the writing process to a standstill and a feeling to wanting to escape and withdraw. I felt that this situation would be best resolved in therapy, where I would be encouraged to reflect on my feelings and make sense of them. This process felt particularly important as I knew that I had to be aware of how my experiences might affect my research, such as the choice of measurement procedures and theories used to study this area.

Throughout the duration of the present research, I also became more aware of my own use of emotion regulation strategies in my personal life. Specifically, the present study from its conception to its completion offered multiple opportunities for myself to be reflective of my own suppression and reappraisal use both in my personal and professional life. For example, due to the intensity and the significance/meaning of the project on my future professional and personal life and development, I had to be able to recognise when I was suppressing my emotions and when I had to reappraise them. For instance, I noticed that the healthy use of reappraisal when I was experienced being 'stuck' at times with regards, for example, to the difficulties encountered with the completion of the statistical analysis offered hope, thereby the emotional strength to carry on rather than 'give up' (e.g., 'I'm not less intelligent, or my study can never be completed because I can't manage/understand specific statistical techniques; I just have to explore other options and/or ask for help').

It would be accurate to say that on the whole the research process stimulated a strong reflective period where I would often reflect about my experiences in depth, spending time and staying with the feelings involved in my early experiences such as loss and pain. Although a difficult process, I strongly believe that the process of completing the present study has challenged me but also helped me get in touch, address and resolve the difficulties that my own experiences created. Additionally, this process has offered a deeper understanding of the complex feelings that are entailed in transforming these experiences/feelings into ways that helped me to find closure and move on.

Similar experiences have taken place in my own work as a therapist, where I became more aware of the complex effects that early parental negative experiences might trigger in adulthood such as emotion regulation. For example, in my clinical practice I have noticed that I am more able to feel deep empathy especially for clients who presented with adverse early experiences as well as emotion regulation difficulties. I can now imagine how it might be for them as ‘I’ve been in similar situations’ yet recognise that each client has a different experience with regard to the difficulties in the use of these two strategies as well as the different bases of experiences that led to their maladaptive use.

Limitations and Future Research Directions

Whilst the strategy of suppression mediated the relationship between paternal and maternal rejection and general psychological health problems, the strategy of reappraisal mediated only the relationship between paternal rejection and psychological health difficulties and mothers appeared to have no influence on offspring’s use of this strategy.

However, the emotion regulation strategies of suppression and reappraisal only partially mediated the relationship between parental rejection and psychological health problems. This finding suggests that there are several additional mediators of the relationship between parental rejection and psychological health. Indeed, John and Gross (2004) noted that suppression and reappraisal are only two of the various strategies that individuals employ to regulate their emotions. Future research could investigate other emotion regulation strategies (e.g., situation modification – Foa & Kozak, 1986; attentional deployment – Sheppes & Gross, 2011) that might greatly add to the understanding of the relationship between parents’ effects on children’s emotion regulation development. The study of other potential mediators might, therefore, shed more light on the understanding of the mechanisms that underpin the relationship between parents’ influences and children’s psychological health development.

In addition, the present study tested only the effects of specific maternal and paternal rejecting behaviours, as outlined on IPARTheory (Rohner, 2015), on the emotion regulation strategies of suppression and reappraisal. Parental rejecting behaviours are only one way that parents might influence children’s emotion regulation development. For example, parental modelling of emotion regulation strategies (Silk et al., 2006; Kopp, 1989), a family’s emotional climate (e.g., high/low levels of expressed emotion),

parents' use of emotion regulation strategies and parents' emotion-related beliefs (Morris et al., 2007; Fosco & Grych, 2013; Greenspan & Shanker, 2004) could also significantly influence offspring's emotion regulation development. For example, the way parents' regulate their emotions might be internalised by children as a model of how/when emotion regulation strategies are used (Bridges et al., 2004; Denham 1998; Thompson, 1994). In addition, parent's emotion-related beliefs (e.g., whether they approve/allow the expression of certain emotions) have also been found as a crucial parental characteristic concerning children's emotion regulation of suppression and reappraisal socialisation (John & Gross, 2004). These studies suggest that parents can influence their children's emotion regulation development in many different ways (Morris et al., 2007). Future studies could therefore investigate whether considering the family's emotional climate and other parental characteristics could add to current understandings about adults' use of reappraisal and suppression.

Moreover, the present research did not examine whether participants perceptual differences of interpersonal power, authority and prestige between their mother and father played a role in the strength of their respective influence. According to Rohner and Carrasco (2014) and Sultana and Khaleque (2016), children's perceptions of their mother as having more interpersonal power and/or prestige within the family than their father seem to significantly influence the extent to which mothers' rejecting behaviours (more than fathers') influence/affect their children's ongoing development of psychological health difficulties (Li & Meier, 2017) and vice-versa when fathers are perceived as having more power (Radin, 1981). Thus, perceived parental rejection influences might not depend on a parent's sex but might be contingent on which parent is perceived as having more prestige and interpersonal power by the child (Rohner & Carrasco, 2014; Sultana & Khaleque, 2016). Future research may benefit from evaluating whether differential levels of parental prestige and interpersonal power influence the child relationships with each parent and emotion regulation and psychological development.

Finally, the personal meaning of participants' retrospective accounts of parental rejection in relation to their current psychological health status and their use of the emotion regulation strategies studied was not captured or examined. As individuals perceptions of early parental rejection as well as their understanding of emotion regulation and psychological problems might vary, a mixed methodology design could have offered a more detailed insight into the father-mother-offspring

relationship and general psychological difficulties and emotion regulation use and/or development. Future research could include interviews with participants who might be willing to discuss their parental relationship and its effects on their current emotion regulation strategies and psychological difficulties in more depth after the completion of the survey. Thus, adding a qualitative element to the study might offer rich and in-depth information regarding the investigated variables as well as allowing the evaluation of outcomes that might be unexpectedly revealed.

Participants' use of suppression

Participants' use of suppression might have also contributed to biased responses. For example, individuals who use suppression as their main emotion regulation strategy to suppress/avoid distressing thoughts and feelings might have also suppressed or avoided reflecting on negative memories of parental experiences, which in turn might have resulted in biased responses such as scoring lower on the rejection items both on the parental rejection questionnaire and on the psychological health problems questionnaire. Indeed, the research topic and questions about perceptions of parenting behaviours or questions inquiring about psychological health might have triggered distressing feelings and/or memories. Thus, suppression might have been automatically activated, resulting in biased responses which in turn might have obscured the study's findings. This might also be a potential reason in regards to the differences between men and women in reporting psychological health problems that was found by Singleton and Lewis (2003), by the MHFR (2016) and by the present study. That is, if men use suppression more (as they reported in the present study), then suppression might be active when they fill in psychological/mental health surveys as well. This action could be interpreted as measurement error of self-report questionnaires on psychological health that is greater for men than for women. Similarly, individuals who frequently use suppression to regulate their emotion might have been less likely to have taken part in this study or might have been more likely to drop out if they found the survey questions distressing. Indeed, 25 percent of 1,515 participants who provided consent dropped out. Consequently, some of the participants who dropped out might have thought that the only way to regulate their distress was to exit the survey. If the dropout rate had been smaller, the research findings might have been significantly different.

Future research could add supporting statements (such as, 'This section of the survey might have been difficult for you, take a break if you need to' or 'Well done for completing this section of the survey') after the completion of each questionnaire to

minimise participants' use of suppression and dropout rates. Furthermore, future research could design the survey in a way that enables participants to return to the survey at a later time if they find themselves distressed or decide to exit it before completion.

Sample characteristics/Sampling bias

The present thesis did not have any specific hypotheses regarding the influences of age, gender, ethnicity, SES and participants' previous psychotherapy engagement on the relationship between perceived maternal and paternal rejection, the emotion regulation strategies of reappraisal and suppression and general psychological health problems. Further detailed analyses, therefore, in regards to the effects of these variables on the study's hypotheses were not conducted. Nevertheless, the fact that the present study's unequal participant numbers with regards to the variables of gender, ethnicity and SES might have affected the present findings. Indeed, sampling bias might affect the internal validity of the statistical analysis by leading to an incorrect estimation of relationships between variables. Sampling bias can also can affect the external validity of statistical analysis since findings from a biased sample may not apply to the population as a whole (Field, 2013).

For example, participants in the present study were predominately female (80.8 percent), 'White' (87.4 percent), and had a middle SES (64.2 percent). These factors might have had significant effects on the study's findings. For example, results showed that female participants experienced a higher level of psychological health problems than male participants. However, according to research, females tend to report more psychological health problems than males when asked (MHFR, 2016) and to seek therapy for psychological problems more than males do (Singleton & Lewis, 2003). Similarly, in the present study, females reported a higher use of the emotion regulation reappraisal strategy than males did. Therefore, the predominantly female sample in the present study might have affected the results with regards to the variables representing psychological health problems and the emotion regulation strategy of reappraisal. Therefore, the predominately female sample in this study might have affected the results by making relationships between the variables appear stronger and the size of effects larger. If the sample was balanced in terms of gender, then the associations might have been weaker and the size of effects smaller. In addition, since the present study did not examine mediation effects of gender on the study's main variables, conclusions about possible effects of gender on the study's main variables were not feasible.

Similarly, the fact that the sample in this study was predominately 'White' might have also played a significant role in the present findings. Indeed, 'White' participants reported a higher level of reappraisal use than 'non-White' participants. 'White' participants also reported lower perceived maternal and paternal rejection than 'non-White' participants. The difference in sampling size in the ethnicity variable might have equally affected both the statistical analysis' internal/external validity since the relationships between the variables might have been much stronger and the size of effects much larger than if the participants' number in ethnicity subgroups were more equal. Therefore, the predominately 'White' sample in this study might have affected the results with regards to the variables representing the emotion regulation strategy of reappraisal.

There may be several reasons for the unequal participants' number for the two gender groups. For example, research has suggested that men are less likely than women to participate in surveys (Moore & Tarnai, 2002). Another reason for this gender difference might be that women are more likely than men to be involved in activities (online) that entail communication and exchange of information while males are more likely to be involved in activities (online) that entail information seeking (Jackson et al., 2001). The present study predominately involved a process of information exchange rather than information seeking, a fact which might explain the unequal number in the gender groups. Finally, research has shown that women are more likely than men to answer questions regarding mental health (Singleton & Lewis, 2003), a fact which could be a further reason for the unequal number in the gender groups.

With regards to the unequal numbers in the ethnicity and SES groups, research has shown that individuals who are less educated and less affluent are less likely to take part in surveys than educated and affluent individuals (Goyder et al., 2002). Similarly, research has shown that in Western societies, 'non-White' individuals are less likely to take part in surveys than 'White' individuals (Voight et al., 2003). The unequal participants' number in the ethnicity (i.e., 'White and non-White') and SES (i.e., low, middle, and upper class) subgroups might have to do with the present study's recruitment snowball sampling method. For example, the researcher's 'Facebook Friends', where the survey was also posted, were predominately 'White' and 'middle class'. If their 'Facebook Friends' were also mostly 'White' and 'middle class' potential 'non-White' and participants from the lower and upper classes would have had fewer chances of coming across the survey.

Future research could attempt to recruit an equal number of participants' gender, and participants with diverse ethnic background and SES or participants' numbers for each subgroup that would be representative of the proportion in the general population of the UK. This balance might be achieved in the advertisement flyer, for instance, by highlighting the necessity for equal gender numbers in particular male and transgender, as they are under-represented in research overall (Lamb, 2010). Similarly, advertisement research flyers could highlight the importance of recruiting individuals from diverse ethnic backgrounds and SES. Thus, awareness of their importance on the parent-child relationship could be raised. Future research could also attempt to use a random sample. This might be achieved, for example, by first establishing a sampling frame from all UK postcodes. Then a random sample could be generated. Then the researchers could send field workers to interview the individuals living on the random generated households. Another option could be to create a quota sample. In other words, researchers could create a sample of participants with characteristics matching the general population (i.e., specific percentages in gender, ethnicity, SES) and create a panel that would be representative of the specific population demographics that the study seeks to examine and/or control for. However, in both approaches anonymity would be compromised, a situation which could lead to problems such as social desirability bias among other biases and these options are resource intensive.

Despite these limitations, nevertheless, these approaches will allow gender/ethnicity/SES interactions to be explored such as the different influences of perceived paternal and maternal rejection on daughters, sons and transgender individuals with diverse ethnic and SES backgrounds. For example, separate models for gender, ethnicity and SES could be constructed in order to draw specific conclusions in regards to their effects on the study's hypotheses. For instance, to examine the effects of gender, two different models (one model for males and one model for females) could be constructed. Therefore, the invariance of the corresponding coefficients across the two models could be assessed for significance and the answer to the question of whether the male or the female group was more influenced by perceived maternal or paternal rejection could be established.

In conclusion, since the present study predominately comprised female, 'White' and middle class participants, it should be noted that the present study's findings cannot be applied to the population as a whole.

Other sources of bias

Other possible sources of bias have been considered such as the choice of informant(s) in quantifying parental behaviour (Schwarz et al., 1985). In particular, parents' reports regarding their parenting behaviour towards participants when they were children or third parties (e.g., siblings) or observer's reports of parental behaviours during participants' childhood have not been collected. However, a reason for not collecting third party self-reports was that they have been criticised for providing weak correlations between parents and children's report of family cohesion and conflict (Fosco et al., 2012). Research has also suggested advantages in employing offspring's accounts of parental behaviours as offspring's development is mostly influenced by perceptions of parenting behaviours, rather than so called 'objective' narratives of events (e.g., Barry, et al., 2008; Khaleque & Rohner, 2002b), which is another reason for not collecting third-party reports regarding perceived maternal and paternal influences on participants' emotion regulation strategies use and psychological health status.

Other confounding variables

Confounding variables such as demand characteristics, for example, fatigue, memory burden, confusion and respondent's feelings whilst completing the survey (Brewin et al., 1993) might have negatively influenced participants' accuracy of responses. In addition, demand characteristics (e.g., fatigue due to the length of the survey) might have been another reason for the high dropout rates. Although, Khaleque and Rohner, (2002b) found that self-report instruments measuring parental practices and psychological and adjustment were a reliable and valid way to minimise potential demand characteristics such as fatigue and respondent's feelings and maximise the accuracy of data collection, the present study might presented the questionnaires for each participant in a different order/sequence (counterbalancing). Thus, demand characteristics would have been spread equally to all questionnaires and not just to the questionnaires that were placed at the end of the survey.

Analyses limitations

Hierarchical multiple regression results showed that the covariates of ethnicity and SES had a significant effect on the relationships between maternal and paternal rejection, the emotion regulation strategies of reappraisal and suppression and general psychological health. However, ethnicity and SES did not have any significant effect when they were tested on the SEM. One reason for the different outcomes might have been that the

multiple regression analyses tested the strategies of reappraisal and suppression separately as predictors (H3 & H4) and outcome variables (H5, H6, H7 & H8) whereas they were tested at the same time in the SEM model as predictors, outcomes and mediator variables. One of the advantages of SEM is that it allows the evaluation of the relative magnitudes of the particular direct/indirect effects associated with each mediator simultaneously more accurately than multiple regression analyses do (Kline, 2015) that might have resulted in non-significant findings for the variables of ethnicity and SES in the SEM. Another reason for the non-significant results of ethnicity and SES might be due to the use of an alpha significance level of .01 ($p < .01$) in the SEM model instead of .05 (in the hierarchical regressions) to avoid a Type I error due to the model-building/trimming process (Ullman, 2001) to achieve the best fit of the data in the SEM analysis.

A further reason for the acceptable rather than strong fit of the SEM models could be that there are several other causes of psychological problems besides the variables tested in the present study, such as behavioural and cultural factors or current life events (Rohner & Britner, 2002). As South and Jarnecke (2015) noted, parental rejection accounted for approximately 21 percent of the variability in psychological adjustment of adults and that other behavioural, genetic, neurobiological and cultural factors might account for the remaining 79 percent.

Finally, because the study's data and methodology was cross-sectional in nature, causality cannot be established. Longitudinal studies are needed in order to evaluate the role of emotion regulation strategies on the relationship between the father-mother-child relationship and children/adolescent/adult/older adults' psychological health problems as they would allow the evaluation of these variables across developmental and longer life-span periods. Therefore, when interpreting the present research findings, the cross-sectional nature of this research should be kept in mind.

Measurement limitations

In addition, limitations in the measurement of some of the demographic variables such as SES and previous psychological treatment measurement might have affected the study's findings. For example, the SES measure in the present study was not validated. The decision for the present study to disregard a validated SES measure was because previous research has shown that individuals' subjective view with regards to their SES was significantly related to their SES as measured by validated SES measures (Adler et

al., 2000; Singh-Manoux, et al., 2005). In other words, people in general have a good idea to which SES they belong (Adler et al., 2000). However, not using a validated SES measure might have had implications such as affecting the evidence of the strength of the association in the relationships examined. For example, if SES was not measured accurately, it might have left some residual confounding, in other words it might have made the relationships examined to appear stronger than they were. As Chetan (2017) noted, while indicators of SES might be correlated, they are distinct and not interchangeable, and how a question is asked might affect their results. A validated and reliable SES measure could have considered all aspects of SES such as wealth, education, income and occupation (Chetan, 2017), but the present study could not determine which of these dimensions were measured. Using SES as a control variable, however, might have produced less biased estimates with regards to the effects of SES. Future research should use SES validated measures and construct separate models for example, in which SES could be a predictor, outcome and control variable in order to draw specific conclusions in regards to its effect on psychological health and emotion regulation.

Furthermore, measuring and controlling for the participants' psychotherapy engagement group variable might have significantly affected the study's findings as well. For example, the inherent characteristics of participants who have had psychotherapy might have produced in turn biased results as they might have responded differently on the study's measures compared to the rest of participants who did not have previous psychotherapy. Indeed, the present study's findings have shown that participants who engaged in psychotherapy scored lower on the reappraisal and higher on the suppression measure and also scored higher on the general psychological health problems measure as opposed to participants indicating no psychotherapy engagement. If the present study did not control for participants' indicating previous psychotherapy engagement, the interactions between the study variables on the main hypotheses might have produced different results. However, although controlling for this variable, its effects on the study's main findings might have been minimized, and it still might have influenced them significantly. The only way to have avoided the effects of participants who indicated psychotherapy engagement would have been to completely exclude them from any statistical analyses.

The present study, however, decided to control for this variable rather than exclude it from analyses as excluding 28.8% (N = 322) of the sample would have reduced the

study's power. Furthermore, the decision to control for this variable was also based on research showing that almost a third (28%) of people in the UK have had psychotherapy experience (BACP, 2014), a percent which is also reflected in the present study. Thus, restricting the sample, by removing participants who have indicated previous psychotherapy experience might have resulted in the sample being less representative of the population as a whole.

Future research could test whether the responses and inherent characteristics (e.g., age, gender, ethnicity, SES) of participants with psychotherapy experience differ significantly from participants with no psychotherapy experience and, depending on the results, a decision could be made whether to exclude the group of participants' with previous psychotherapy in order to avoid significant effects that might obscure the study's findings. Future research could also enter this variable as predictor, outcome or control variable. For example, separate models for participants with and without psychotherapy experience could be constructed and tested in order to draw specific conclusions regarding its effect on psychological health and emotion regulation.

Strengths of the study

The present research had significant strengths. In accordance with the researcher's post-positivist epistemological stance, the researcher of this study acknowledges that reality can never be known with absolute certainty. However, the researcher also acknowledges that objectivity can be approached by identifying potential influences of biases and by taking specific safety measures to minimise these. For example, memories of parental practices or questions regarding general psychological health problems might trigger shameful, distressing and stigmatising (Haghighat, 2001) feelings. Such feelings in turn might affect the honesty of their responses (Schwartz et al., 1985). To decrease this possibility and to enhance participants' honesty, the present study ensured anonymity and confidentiality by gathering data online and not asking for identifying information. This measure has been previously found to enhance truthful responses by more than 74% in sensitive, shameful or stigmatising questions (Ong & Weiss, 2000). In addition, the online design offered participants the option to complete the survey at a time they felt relaxed, in order to minimise mood state recollection effects (Brewin et al., 1993). Because participants' reports remained anonymous and confidential, participants might have been more likely to have felt safer and more open so they might have been more likely to respond honestly.

In addition, the present study based its methodology on the well-established IPARTheory (Rohner, 2015) and Process-Focused Emotion Regulation Model (Gross, 1998b) and its assessment instruments on the ERQ (Gross & John, 2003) and PARQ (Rohner & Khaleque, 2005) measures. Although the researcher of this study considers these measurement instruments as inherently fallible since they are humanly constructed (Robson, 2002), they have undergone modifications to address previous criticisms (Ki, 2015; Rohner, 2004; Rohner & Khaleque, 2010). This means that they have survived researchers' examinations to approach the relative 'truth' of phenomena studied (Rohner & Khaleque, 2010; Ali et al., 2018; Khaleque & Ali, 2017; Gross & John, 2003; Gross et al., 2004) and have both been found valid and reliable cross-culturally (e.g., Cabello et al., 2013; Enebrink et al., 2013; Machado & Machado, 2012; Gomez & Rohner, 2011; Tsaounis et al., 2012). By employing measures that are well established within their fields of research, such as the PARQ and ERQ, these methods have been subjected to the process of falsification as required in post-positivist research (Popper, 2002a).

Moreover, the researcher was aware of his post-positivist position in which his values and background could influence his choices on the research topic that he has investigated (Robson, 2002). For example, whilst neutrality was the main goal when seeking 'the objective truth' in evaluating the research questions/hypotheses, he was also aware that his values might have unintentionally influenced the way he approached the research topic by the selection of instrument measures, recruitment process and theoretical orientation which is another reason the present study to employ the well-established IPARTheory (Rohner, 2015) and the Process-Focused Model of Emotion Regulation (Gross, 1998b).

A further strength of this study is that it differentiated each parent's influences on adult-offspring's emotion regulation use as opposed to the majority of previous research that has concentrated mainly on maternal influences (e.g., Hardy et al., 1993; Calkins & Johnson, 1998; Wald et al., 2018). The present study's sample also entailed 1,117 adult participants ranging from 18-76 years of age with an average age of about 36 years. This study therefore was unlike the majority of research evaluating the influences of parental behaviours on the emotion regulation strategies of reappraisal and suppression mainly on samples that were significantly smaller to the present study's sample and involved early childhood (e.g., Sanders et al., 2015; Frankel et al., 2015; Gunzenhauser et al., 2014), occasionally early or middle childhood or early and late adolescent sample

(Jaffe et al., 2010; Bariola et al., 2012). Thus, the present study addressed this gap and extended the literature investigating the effects of perceived maternal and paternal negative behaviours on the emotion regulation strategies of reappraisal and suppression from the childhood/teenage years to approximately middle-age years.

Finally, this study investigated the mediating effects of suppression and reappraisal on the relationship between perceived maternal and paternal rejection on psychological health problems. Therefore, the present study adds to the existing literature on the processes such as perceived behavioural competence (Affrunti & Ginsburg, 2012) and emotional self-efficacy (Niditch & Varela, 2012) that might mediate the relationship between mothers' and fathers' parenting behaviours and offspring psychological health, by adding the emotion regulation strategies of suppression and reappraisal.

Conclusion

The current thesis focused mainly on fathers' influences on offspring's emotional and psychological development because historically, fathers have not received adequate attention in the literature (Cassano et al., 2006; Luebbe et al., 2013; Bariola et al., 2011). The present study, therefore, aimed to: a) replicate and extend previous research findings showing fathers' effects on their offspring's psychological health difficulties and emotion regulation development independently from mothers' effects (e.g., Akun, 2017; Carrasco et al., 2014; Gunzenhauser et al., 2014) and b) to fill a gap in the parent-child literature by investigating the mediation effects of the emotion regulation strategies of suppression and reappraisal on the relationship between perceived early paternal rejecting behaviours and adult-offspring's psychological health difficulties. The study adopted a post-positivist framework that was based on the well-established frameworks of Interpersonal/Parental Acceptance-Rejection Theory (Rohner, 2015) and the Process-Focused Emotion Regulation model (Gross, 1998b). Participant's data were analysed by using quantitative methods that entailed multiple regression and SEM analyses.

Keeping in mind the study's cross-sectional data, non-experimental nature and the study's limitations, results were in accordance with a considerable body of research suggesting a significant relationship between perceived paternal rejection and psychological health difficulties and emotion regulation development independently from maternal rejection effects on psychological health and emotion regulation difficulties. Results have also shown that the relationship between adult-offspring's

perceptions of early paternal (not maternal) rejecting parenting and their current psychological health difficulties were significantly influenced via the emotion regulation strategy of reappraisal. However, this was a partial mediation as the direct effect of perceived paternal rejection effects on adult-offspring psychological health difficulties was also significant. This finding, nevertheless, suggests fathers' independent contribution towards offspring's psychological health difficulties and emotion regulation development and their unique contribution to offspring's psychological health difficulties through the use of the strategy of reappraisal are significant.

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Appendices

Appendix A

Recruitment Flyer

I am currently conducting research for my Doctorate in Counselling Psychology at the University of East London on childhood experiences of parental rearing styles and would be extremely grateful if you could spare 25 minutes of your time to participate in my online study. You will not be required to provide your name or email, and therefore your identity will remain completely anonymous. Furthermore, all of the information that you provide will be kept strictly confidential and private.

This research study is intended for individuals who are over 18 years old and have lived with both biological parents from birth until the age of 12.

I would very much appreciate if you could forward this advert to anyone who may be willing to participate in the study online at the following web address:

<https://www.surveymonkey.com>

Thank you very much for your time.

Best wishes,

Zacharias Vogiatzis

Appendix B

Participant Invitation Letter UNIVERSITY OF EAST LONDON

School of Psychology

Stratford Campus

Water Lane

London E15 4LZ

The Principal Investigator:

Zacharias Vogiatzis

Contact Details: u0616545@uel.ac.uk

The study will investigate the relationship between paternal rearing style, emotional health, and how people manage their emotions. The study aims to provide more insight into the effects of paternal rearing strategies on the ability to manage emotions, emotional development and emotional health processes. The study also aims to evaluate the impact of paternal rearing on child development and evaluate the nature of the relationship between paternal rearing style and adult emotional health.

In order to be eligible to participate to this study you will have to be:

1) At least 18 years old or above.

PLEASE CLICK ON THE STATEMENT BELOW THAT APPLIES TO YOU

YES, I AM OVER 18 YEARS OLD AND I WOULD LIKE TO PARTICIPATE IN THIS STUDY

NO, I AM YOUNGER THAN 18 YEARS OLD

2) Have had both your biological parents living with you from birth until your 12th year of age.

PLEASE CLICK ON THE STATEMENT BELOW THAT APPLIES TO YOU

YES, I HAVE LIVED WITH BOTH MY BIOLOGICAL PARENTS UNTIL MY 12TH YEAR OF AGE

NO, I DID NOT LIVE WITH BOTH MY BIOLOGICAL PARENTS UNTIL MY
12TH YEAR OF AGE

You will be asked to complete a secure online survey, which will take 25 minutes to complete. The survey is anonymous, which means we will not ask your name, contact details, or other identifying information that could link survey answers to your identity. The survey contains questions about your memories and experiences of your parental relationships during childhood as well as your current mood and psychological functioning. The nature of the questions may result in mild distress and/or re-experiencing unpleasant memories, although we believe this is a very low risk. However, for some participants, study questions may trigger unpleasant or uncomfortable memories that might be more than mildly distressing. Should you experience distress as a result of this survey, we have provided you with a list of resources for advice and support at the end of this letter and at the end of the survey. You are not obligated to complete the survey and may end your participation at any time without consequence. Whilst you are completing the survey, you can go back to previous pages and update existing responses until the survey is finished or until you have exited the survey. After the survey is finished, you will not be able to re-enter the survey.

Confidentiality of the Data

The research study is being conducted through the use of www.SurveyMonkey.com, which is a secure and encrypted data collection service. SurveyMonkey uses SSL encryption to protect sensitive data as it moves along communication pathways between the participant's computer and SurveyMonkey's servers. SurveyMonkey policy is not to use the information collected from the research in any way or sell or share the study's responses with third party advertisers or marketers. Survey Monkey store their data in a SOC 2, Type II audited facility, staffed and surveyed. For more information on SurveyMonkey's privacy policy please refer to <http://www.surveymonkey.com/mp/policy/privacy-policy/>.

Data is collected anonymously, which means that researchers won't be able to link any information you provide on the survey to your name or other identifying information like your address or phone number. Data will be stored on a private computer and will be protected by a password. Only the researcher and the study supervisor will have access to raw data. The data received from the questionnaire will be kept confidential

and private. Once the data has been analysed, it will be stored on a private password-protected computer and/or secure server for the minimum amount of time, which is usually five to seven years after a manuscript has been published. Any published work from this study will never include names or other identifying information of participants.

Disclaimer

You are not obliged to take part in this study and should not feel coerced. You are free to withdraw from the study at any time by stopping answering questions on the survey and closing your internet browser window. Should you choose to withdraw from the study, you may do so without disadvantage to yourself or your relationship with the University of East London. You do not need to give a reason for choosing to end your study participation. Should you wish to withdraw from the study after completing the survey, the researcher reserves the right to use the anonymous data in the write-up.

Survey link: <http://www.surveymonkey.com>

If you have any questions or concerns about the study, please contact me at 0616545@uel.ac.uk or the study's supervisor, Dr Matteo Martini, at m.martini@uel.ac.uk, School of Psychology, University of East London, Water Lane, London E15 4LZ.

Finally, if for some reason you have any concerns relating to your experience as a participant in this study and do not find it appropriate to use the contacts above, the resources listed below are recommended. Please be aware that UEL is not affiliated in any way and has no connection to the organisations below.

- British Association of Social Workers (BASW)

<https://www.basw.co.uk/>

Email: online@basw.co.uk

Tel: +44 (0) 121 622 3911

- National Association for People Abused in Childhood (NAPAC)

<http://napac.org.uk/>

Email: info@napac.org.uk

Tel: 0808 801 0331

- Support Line (confidential emotional support)

<http://www.supportline.org.uk/>

Email: info@supportline.org.uk

Tel: 0170876522

- Aurora health Foundation (specialist therapy service for men and women adult victims of childhood abuse)

http://www.aurorafoundation.org.uk/#!/links/sitepage_10

Email: info@aurorafoundation.org.uk

Tel: +44 (0) 20 8541 1951

- The Survivors Trust (a national umbrella agency for over 135 specialist rape, sexual violence and childhood sexual abuse support organisations throughout the UK)

<http://www.thesurvivorstrust.org/>

Email: info@thesurvivorstrust.org

Tel: 0808 801 0818 FREE

The National Association for Mental Health (MIND)

<http://www.mind.org.uk/information-support/helplines/>

Email: info@mind.org.uk

Tel: 03001233393

Although the majority of the links above are free, please note that any cost in seeking medical/psychological assistance is at your own expense.

Thank you in anticipation.

Yours sincerely,

Zacharias Vogiatzis

UNIVERSITY OF EAST LONDON

Supervisor: Dr Matteo Martini

University of East London

Appendix C

Participant Consent Form

I have read the information relating to the above research study and I have understood the nature and purposes of this research. I understand that, if I would like further information, details or questions answered, I can use the contact details provided to me below by the researcher. I also understand what is being proposed and the procedures in which I will be involved have been clear.

I understand that my involvement in this study, and particular data from this research, will remain strictly confidential. Only the researcher(s) involved in the study will have access to data. I understand what will happen once the research study has been completed.

I understand that by choosing to click on the YES button I have understood the above information and I AGREE to freely and fully consent to participate in the study. Having given this consent, I understand that I have the right to withdraw from the study at any time without disadvantage to myself and without being obliged to give any reason, upon data collection by closing my internet browser window. I also understand that, once I conclude the study, it will not be possible to withdraw and the researcher reserves the right to use my anonymous data in the write-up of the study and in any further analysis that may be conducted by the researcher.

Contact details: If you have any questions or concerns about the study, please do not hesitate to contact me at u0616545@uel.ac.uk or the study's supervisor, Dr Matteo Martini, at m.martini@uel.ac.uk, School of Psychology, University of East London, Water Lane, London E15 4LZ School of Psychology, University of East London, Water Lane, London, E15 4LZ.

I AM OVER 18 YEARS OLD

YES NO

I AGREE TO FREELY AND FULLY CONSENT TO PARTICIPATE IN THIS STUDY

YES NO

Appendix D

Participant Debriefing Form(s)

Thank you for participating in this study. The purpose of the following text is to offer a brief description of the topic and aim of the study as well as to provide the means to contact the researchers should you wish to know more.

Originally, proposed by Rohner and Rohner (1980,) the interpersonal and parental acceptance-rejection theory (PART) proposes that rejective parental-rearing practices relate to poorer emotional health of adult offspring and vice-versa, yet research supporting PART theory has focused almost exclusively on maternal rearing practices (Saracho & Spodek, 2008). Furthermore, individuals seem to acquire skills in managing their emotions early in their lives through parental practices; and adults with less effective skills in managing their emotions tend to experience poorer emotional health (Savostyanova & Kashdan, 2012; Allen & Barlow, 2009; Eisner, Johnson, & Carver, 2009). A few studies that have examined the impact of paternal rearing practices researching adult-offspring have indicated that higher adult-offspring emotional health and effective emotional skills were predicted significantly more by the father-child rearing practices than the equivalent mother-child rearing practices (e.g., Williams & Kelly, 2005). As such, the study hypothesizes that early paternal rearing practices will influence adults' offspring emotional health as well as the strategies that they use to manage their emotions.

Thank you again for participating in this study, and we would be very grateful if you share the link to this study with any friends or acquaintances who would be willing to participate.

If you have any questions or concerns about the study, please do not hesitate to contact me at u0616545@uel.ac.uk or the study's supervisor, Dr Matteo Martini, at m.martini@uel.ac.uk, School of Psychology, University of East London, Water Lane, London E15 4LZ.

Your confidentiality, privacy and anonymity will be ensured in the collection, storage and publication of research material. Once you have exited this survey, it will not be possible to re-enter the survey to view or modify your responses.

In order to increase your privacy, we advise all participants to clear their web history once closing out of this window. Please find the following instructions for guidance on how to do this.

Microsoft Windows users running Microsoft Internet Explorer 6 and above can delete their history files by clicking the "Tools" menu, "Internet Options", and clicking the "Delete Files" or "Delete" button.

Mozilla Firefox Users can clear their history by clicking the "Tools" menu, "Options", clicking the "Privacy" button, and under "History" click the "Clear" or "Clear Now" button.

Safari users can clear their history by clicking on the "gear" icon, which is located near the top-right side of the browser window. Click the "Reset Safari" link. Check "Clear history" to clear the history. Once your options have been selected, click the "Reset" button.

Finally, if for some reason you have any concerns relating to your experience as a participant in this study and do not find it appropriate to use the contacts above, the resources listed below are recommended. Please be aware that UEL is not affiliated in any way and has no connection to the organisations below.

- British Association of Social Workers (BASW)

<https://www.basw.co.uk/>

Email: online@basw.co.uk

Tel: +44 (0) 121 622 3911

- National Association for People Abused in Childhood (NAPAC)

<http://napac.org.uk/>

Email: info@napac.org.uk

Tel: 0808 801 0331

- Support Line (confidential emotional support)

<http://www.supportline.org.uk/>

Email: info@supportline.org.uk

Tel: 0170876522

- Aurora health Foundation (specialist therapy service for men and women adult victims of childhood abuse)

http://www.aurorafoundation.org.uk/#!/links/sitepage_10

Email: info@aurorafoundation.org.uk

Tel: +44 (0) 20 8541 1951

- The Survivors Trust (a national umbrella agency for over 135 specialist rape, sexual violence and childhood sexual abuse support organisations throughout the UK)

<http://www.thesurvivorstrust.org/>

Email: info@thesurvivorstrust.org

Tel: 0808 801 0818 FREE

The National Association for Mental Health (MIND)

<http://www.mind.org.uk/information-support/helplines/>

Email: info@mind.org.uk

Tel: 03001233393

Although the majority of the links above are free, please note that any cost in seeking medical/psychological assistance is at your own expense.

Thank you in anticipation.

Yours sincerely,

Zacharias Vogiatzis

You may now close this webpage

Debriefing form for ineligible participants

Thank you for your willingness to take part in this study but unfortunately you have not met the criteria for participation. The purpose of the following text is to offer a brief description of the topic and aim of the study, as well as to provide the means to contact the researchers should you wish to know more.

Originally, proposed by Rohner and Rohner (1980), the interpersonal and parental acceptance-rejection theory (PART) proposes that rejective parental-rearing practices relate to poorer emotional health of adult offspring and vice-versa, yet research supporting PART theory has focused almost exclusively on maternal rearing practices (Saracho & Spodek, 2008). Furthermore, individuals seem to acquire skills in managing their emotions early in their lives through parental practices; and adults with less effective skills in managing their emotions tend to experience poorer emotional health (Savostyanova & Kashdan, 2012; Allen & Barlow, 2009; Eisner, Johnson, & Carver, 2009). A few studies that have examined the impact of paternal rearing practices researching adult-offspring have indicated that higher adult-offspring emotional health and effective emotional skills were predicted significantly more by the father-child rearing practices than the equivalent mother-child rearing practices (e.g., Williams & Kelly, 2005). As such, the study hypothesizes that early paternal rearing practices will influence adults' offspring emotional health as well the strategies that they use to manage their emotions.

Thank you again for your willingness to take part in this study. We would be very grateful if you share the link to this study with any friends or acquaintances who would be willing to participate.

If you have any questions or concerns about the study, please do not hesitate to contact me at u0616545@uel.ac.uk or the study's supervisor, Dr Matteo Martini, at m.martini@uel.ac.uk, School of Psychology, University of East London, Water Lane, London E15 4LZ School of Psychology, University of East London, Water Lane, London E15 4LZ. Your confidentiality, privacy and anonymity will be ensured in the collection, storage and publication of research material. Once you have exited this survey, it will not be possible to re-enter the survey to view or modify your responses.

In order to increase your privacy, we advise all participants to clear their web history once closing out of this window. Please find the following instructions for guidance on how to do this.

Microsoft Windows users running Microsoft Internet Explorer 6 and above can delete their history files by clicking the "Tools" menu, "Internet Options", and clicking the "Delete Files" or "Delete" button.

Mozilla Firefox Users can clear their history by clicking the "Tools" menu, "Options", clicking the "Privacy" button, and under "History" click the "Clear" or "Clear Now" button.

Safari users can clear their history by clicking on the "gear" icon, which is located near the top-right side of the browser window. Click the "Reset Safari" link. Check "Clear history" to clear the history. Once your options have been selected, click the "Reset" button.

Finally, if for some reason you have any concerns relating to your experience as a participant in this study and do not find it appropriate to use the contacts above, the resources listed below are recommended. Please be aware that UEL is not affiliated in any way and has no connection to the organisations below.

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<https://www.basw.co.uk/>

Email: online@basw.co.uk

Tel: +44 (0) 121 622 3911

- National Association for People Abused in Childhood (NAPAC)

<http://napac.org.uk/>

Email: info@napac.org.uk

Tel: 0808 801 0331

- Support Line (confidential emotional support)

<http://www.supportline.org.uk/>

Email: info@supportline.org.uk

Tel: 0170876522

- Aurora health Foundation (specialist therapy service for men and women adult victims of childhood abuse)

http://www.aurorafoundation.org.uk/#!/links/sitepage_10

Email: info@aurorafoundation.org.uk

Tel: +44 (0) 20 8541 1951

- The Survivors Trust (a national umbrella agency for over 135 specialist rape, sexual violence and childhood sexual abuse support organisations throughout the UK)

<http://www.thesurvivorstrust.org/>

Email: info@thesurvivorstrust.org

Tel: 0808 801 0818 FREE

- The National Association for Mental Health (MIND)

<http://www.mind.org.uk/information-support/helplines/>

Email: info@mind.org.uk

Tel: 03001233393

Although the majority of the links above are free, please note that any cost in seeking medical/psychological assistance is at your own expense.

Thank you in anticipation.

Yours sincerely,

Zacharias Vogiatzis

You may now close this webpage

Appendix E

Demographic Variables/Questionnaire

First, we would like to collect some biographical information. This will not in any way be used to identify you. We will use this information to report characteristics of people who helped with our research.

Please indicate your age in numerical writing (e.g., 33)

Please click on the option that describes your gender

Male Female Transgender

Please indicate your ethnic group by clicking the option that best describes your ethnic group or background.

White English

White British

Any other White background

White and Black Caribbean

White and Black African

White and Asian

Black British

Black African

Black Caribbean

Any other Black background

British Asian

Any other Asian background

Arab

Any other ethnic group

Have you ever had weekly psychological therapy for more than three months?

YES

NO

Please click on one out of the four options that best describes your parents' socio-economic status.

Lower

Middle

Higher

Upper

Appendix F

Maternal/Paternal Acceptance-Rejection Questionnaire

MY MOTHER

The following pages contain a number of statements describing the way mothers sometimes act toward their children. Read each statement carefully and think how well it describes the way your mother treated you when you were about 7-12 years old. Work quickly. Give your first impression and move on to the next item. Do not dwell on any item.

Click on only one circle under each statement. If the statement is basically true about the way your mother treated you, then ask yourself “What it almost always true?” or “Was it only sometimes true?” If you think you mother almost always treated you that way, click on the statement ALMOST ALWAYS TRUE; if the statement was sometimes true about the way your mother treated you, then click on the SOMETIMES TRUE statement. If you feel the statement is basically untrue about the way your mother treated you, then ask yourself, “Was it rarely true?” or “Was it almost never true?” If it is rarely true about the way your mother treated you, then click on the RARELY TRUE statement; if you feel the statement is almost never true, click on the ALMOST NEVER TRUE statement.

Remember, there is no right or wrong answer to any statement, so be as honest as you can. Respond to each statement the way you feel your mother really was rather than the way you might have liked her to be.

EXAMPLE: MY MOTHER

Hugged and kissed me when I was good

Almost Always True Sometimes True Rarely True Almost Never True

•

○

○

○

MY MOTHER

Said nice things about me

Almost Always True Sometimes True Rarely True Almost Never True

0

0

0

0

Paid no attention to me

Almost Always True Sometimes True Rarely True Almost Never True

0

0

0

0

Made it easy for me to tell her things that were important to me

Almost Always True Sometimes True Rarely True Almost Never True

0

0

0

0

Hit me, even when I did not deserve it

Almost Always True Sometimes True Rarely True Almost Never True

0

0

0

0

Saw me as a big nuisance

Almost Always True Sometimes True Rarely True Almost Never True

0

0

0

0

Punished me severely when she was angry

Almost Always True Sometimes True Rarely True Almost Never True

0

0

0

0

Was too busy to answer my questions

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Seemed to dislike me

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Was really interested in what I did

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Said many unkind things to me

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Paid no attention when I asked for help

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Made me feel wanted and needed

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Paid a lot of attention to me

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Went out of her way to hurt my feelings

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Forgot important things I thought she should remember

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Made me feel not loved any more if I misbehaved

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Made me feel what I did was important

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Frightened or threatened me when I did something wrong

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Cared about what I thought, and liked me to talk about it

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Felt other children were better than I was no matter what I did

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Let me know I was not wanted

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Let me know she loved me

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Paid no attention to me as long as I did nothing to bother her

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Treated me gently and with kindness

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Paternal Acceptance-Rejection Questionnaire

MY FATHER

The following pages contain a number of statements describing the way fathers sometimes act toward their children. Read each statement carefully and think how well it describes the way your father treated you when you were about 7-12 years old. Work quickly. Give your first impression and move on to the next item. Do not dwell on any item.

Click on one circle under each statement. If the statement is basically true about the way your father treated you, then ask yourself “What if it almost always true?” or “Was it only sometimes true?” If you think your father almost always treated you that way, click on the statement ALMOST ALWAYS TRUE; if the statement was sometimes true about the way your father treated you, then click on the SOMETIMES TRUE statement. If you feel the statement is basically untrue about the way your father treated you, then ask yourself, “Was it rarely true?” or “Was it almost never true?” If it is rarely true about the way your father treated you, then click on the RARELY TRUE statement; if you feel the statement is almost never true, click on the ALMOST NEVER TRUE statement.

Remember, there is no right or wrong answer to any statement, so be as honest as you can. Respond to each statement the way you feel your father really was rather than the way you might have liked him to be.

EXAMPLE: MY FATHER

Hugged and kissed me when I was good

Almost Always True	Sometimes True	Rarely True	Almost Never True
--------------------	----------------	-------------	-------------------

•

○

○

○

MY FATHER

Said nice things about me

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Paid no attention to me

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Made it easy for me to tell him things that were important to me

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Hit me, even when I did not deserve it

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Saw me as a big nuisance

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Punished me severely when he was angry

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Was too busy to answer my questions

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Seemed to dislike me

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Was really interested in what I did

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Said many unkind things to me

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Paid no attention when I asked for help

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Made me feel wanted and needed

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Paid a lot of attention to me

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Went out of his way to hurt my feelings

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Forgot important things I thought he should remember

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Made me feel not loved any more if I misbehaved

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Made me feel what I did was important

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Frightened or threatened me when I did something wrong

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Cared about what I thought, and liked me to talk about it

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Felt other children were better than I was no matter what I did

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Let me know I was not wanted

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Let me know he loved me

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Paid no attention to me as long as I did nothing to bother him

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Treated me gently and with kindness

Almost Always True	Sometimes True	Rarely True	Almost Never True
0	0	0	0

Appendix G

Emotion Regulation Questionnaire

We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer by clicking on the number that indicates the degree to which you strongly disagree or strongly agree with each statement by clicking on one number next to the statement that most applies to you by using the following scale:

EXAMPLE

When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.

1 o	2 o	3 o	4 •	5 o	6 o	7 o
Strongly disagree			neutral			strongly agree

I keep my emotions to myself.

1 o	2 o	3 o	4 o	5 o	6 o	7 o
Strongly disagree			neutral			strongly agree

When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.

1 o	2 o	3 o	4 o	5 o	6 o	7 o
Strongly disagree			neutral			strongly agree

When I am feeling positive emotions, I am careful not to express them.

1 o 2 o 3 o 4 o 5 o 6 o 7 o

Strongly disagree neutral strongly agree

When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.

1 o 2 o 3 o 4 o 5 o 6 o 7 o

Strongly disagree neutral strongly agree

I control my emotions by not expressing them.

1 o 2 o 3 o 4 o 5 o 6 o 7 o

Strongly disagree neutral strongly agree

When I want to feel more positive emotion, I change the way I'm thinking about the situation.

1 o 2 o 3 o 4 o 5 o 6 o 7 o

Strongly disagree neutral strongly agree

I control my emotions by changing the way I think about the situation I'm in.

1 o 2 o 3 o 4 o 5 o 6 o 7 o

Strongly disagree neutral strongly agree

When I am feeling negative emotions, I make sure not to express them.

1 o	2 o	3 o	4 o	5 o	6 o	7 o
Strongly disagree			neutral			strongly agree

When I want to feel less negative emotion, I change the way I'm thinking about the situation.

1 o	2 o	3 o	4 o	5 o	6 o	7 o
Strongly disagree			neutral			strongly agree

Appendix H

Brief Symptom Inventory - General Psychological Health Problems

The present questionnaire consists of a list of problems people sometimes have. Read each one carefully and click on the circle under the response that best describes HOW MUCH THAT PROBLEM HAS DISTRESSED OR BOTHERED YOU DURING THE PAST 7 DAYS INCLUDING TODAY:

The questionnaire allows you only to click only on one response for each problem at a time. Do not skip any items. If you change your mind, click on your new answer and your previous answer will be automatically un-clicked. There are no wrong or right answers. Please answer each question truthfully.

Example

HOW MUCH YOU WERE DISTRESSED BY:

Nervousness or shakiness inside:

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Nervousness or shakiness inside

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Fainting or dizziness

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

The idea that someone else can control your thoughts

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Feeling others are to blame for most of your troubles

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Trouble remembering things

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Feeling easily annoyed or irritated

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Pains in heart or chest

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Feeling afraid in open spaces or on the streets

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Thoughts of ending your life

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Feeling that most people cannot be trusted

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Poor appetite

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Suddenly scared for no reason

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Temper outbursts that you could not control

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Feeling lonely even when you are with people 4

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Feeling blocked in getting things done

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Feeling lonely

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Feeling blue

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Feeling no interest in things

Not at all	A little bit	Moderately	Quite a bit	Extremely
o	o	o	o	o

HOW MUCH YOU WERE DISTRESSED BY:

Feeling fearful

Not at all	A little bit	Moderately	Quite a bit	Extremely
o	o	o	o	o

HOW MUCH YOU WERE DISTRESSED BY:

Your feelings being easily hurt

Not at all	A little bit	Moderately	Quite a bit	Extremely
o	o	o	o	o

HOW MUCH YOU WERE DISTRESSED BY:

Feeling that people are unfriendly or dislike you

Not at all	A little bit	Moderately	Quite a bit	Extremely
o	o	o	o	o

HOW MUCH YOU WERE DISTRESSED BY:

Feeling inferior to others

Not at all	A little bit	Moderately	Quite a bit	Extremely
o	o	o	o	o

HOW MUCH YOU WERE DISTRESSED BY:

Nausea or upset stomach

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Feeling that you are watched or talked about by others

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Trouble falling asleep

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Having to check and double-check what you do

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Difficulty making decisions

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Feeling afraid to travel on buses, subways, or trains

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Trouble getting your breath

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Hot or cold spells

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Having to avoid certain things, places, or activities because they frighten you

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Your mind going blank

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Numbness or tingling in parts of your body

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

The idea that you should be punished for your sins

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Feeling hopeless about the future

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Trouble concentrating

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Feeling weak in parts of your body

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Feeling tense or keyed up

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Thoughts of death or dying

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Having urges to beat, injure or harm someone

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Having urges to break or smash things

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Feeling very self-conscious with others

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Feeling uneasy in crowds, such as shopping or at a movie

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Never feeling close to another person

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Spells of terror or panic

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Getting into frequent arguments

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Feeling nervous when you are left alone

Not at all A little bit Moderately Quite a bit Extremely

☐ ☐ ☐ ☐ ☐

HOW MUCH YOU WERE DISTRESSED BY:

Others not giving you proper credit for your achievements

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Feeling so restless you couldn't sit still

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Feelings of worthlessness

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Feeling that people will take advantage of you if you let them

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

Feelings of guilt

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH YOU WERE DISTRESSED BY:

The idea that something is wrong with your mind

Not at all	A little bit	Moderately	Quite a bit	Extremely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix I

Ethical Approval

School of Psychology Research Ethics Committee
NOTICE OF ETHICS REVIEW DECISION
For research involving human participants BSc/MSc/MA/Professional Doctorates

REVIEWER: Sharon Cahill

SUPERVISOR: Matteo Martini

COURSE: Professional Doctorate in Counselling Psychology

STUDENT: Zacharias Vogiatzis

TITLE OF PROPOSED STUDY: The relationship between adult-offspring retrospective reports of paternal rearing style, adult psychological functioning and the role of emotion-regulation.

DECISION OPTIONS:

1. **APPROVED:** Ethics approval for the above named research study has been granted from the date of approval (see end of this notice) to the date it is submitted for assessment/examination.
2. **APPROVED, BUT MINOR AMENDMENTS ARE REQUIRED BEFORE THE RESEARCH COMMENCES** (see Minor Amendments box below): In this circumstance, re-submission of an ethics application is not required but the student must confirm with their supervisor that all minor amendments have been made before the research commences. Students are to do this by filling in the confirmation box below when all amendments have been attended to and emailing a copy of this decision notice to her/his supervisor for their records. The supervisor will then forward the student's confirmation to the School for its records.
3. **NOT APPROVED, MAJOR AMENDMENTS AND RE-SUBMISSION REQUIRED** (see Major Amendments box below): In this circumstance, a revised ethics application must be submitted and approved before any research takes place. The revised application will be reviewed by the same reviewer. If in doubt, students should ask their supervisor for support in revising their ethics application.

DECISION ON THE ABOVE-NAMED PROPOSED RESEARCH STUDY
(Please indicate the decision according to one of the 3 options above)

Minor amendments – Pen and Paper version to be completed on University Property ONLY

Minor amendments required (for reviewer): Matteo, I don't think that the pen and paper version of this should be done in public places bearing in mind the topic. I'd suggest that the student does this on University property ONLY.

Major amendments required (for reviewer):

ASSESSMENT OF RISK TO RESEARCHER (for reviewer)

If the proposed research could expose the researcher to any of kind of emotional, physical or health and safety hazard? Please rate the degree of risk:

☐

HIGH

☐

XXXXMEDIUM

☒

LOW

Reviewer comments in relation to researcher risk (if any):

Student to complete Pen and Paper version on University Property ONLY

Reviewer (Typed name to act as signature): Sharon Cahill

Date: 18th November 2016

This reviewer has assessed the ethics application for the named research study on behalf of the School of Psychology Research Ethics Committee

Confirmation of making the above minor amendments (for students):

I have noted and made all the required minor amendments, as stated above, before starting my research and collecting data.

Student's name (*Typed name to act as signature*): Zacharias Vogiatzis
Student number: u0616545

Date: 02/12/2016

(Please submit a copy of this decision letter to your supervisor with this box completed, if minor amendments to your ethics application are required)

PLEASE NOTE:

*For the researcher and participants involved in the above named study to be covered by UEL's insurance and indemnity policy, prior ethics approval from the School of Psychology (acting on behalf of the UEL Research Ethics Committee), and confirmation from students where minor amendments were required, must be obtained before any research takes place.

*For the researcher and participants involved in the above named study to be covered by UEL's insurance and indemnity policy, travel approval from UEL (not the School of Psychology) must be gained if a researcher intends to travel overseas to collect data, even if this involves the researcher travelling to his/her home country to conduct the research. Application details can be found here: <http://www.uel.ac.uk/gradschool/ethics/fieldwork/>

Appendix J

FIGURE 4.3. Initial SEM analysis showing paths (arrows) between the predictor variables of perceived maternal and paternal rejection, the mediator variables of reappraisal and suppression, the outcome variable of general psychological health problems and the covariate variables of age, gender SES, ethnicity and psychotherapy.

